THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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PECULIAR TO MAY.

"Plant Flowers!
Thickly now the flower seeds sprinkle,
Let the darling earth-stars twinkle
Everywhere!
By fountain's brim, where the rainbow glances,
In garden walk, where your child's foot dances,
Train them with care!"

THE merry, beautiful, month of MAY is here! Now fairly awakened from its long repose, all the vegetable kingdom shows that, in its winter nap, it has laid up new stores of energy, which are budding or blossoming into a freshness and fragrance as delightful as though they met our senses for the first time.

The charming *May-Flower* has become a love-token. They are sought for far and near, and are not only sent as tokens of affection or kind remembrance, but have become articles of commerce, and may be found for sale in various places. Fathers carry them home to their children, and lovers to their affianced, or those whom they wish to have become so. Laughing girls deck their hair with them or wear them on the bosom.

But the great charm is to search for them in pairs, young men and maidens, in the pure air and glowing sunlight of a real May morning!—the maidens, perhaps, like Proserpine, themselves the fairest flowers! Sometimes they find them "beneath the edge of a snow-bank, where they may be seen rising, the fragrant, pearly, white or rose-colored, crowded flowers of this earliest harbinger of spring. It abounds in the edges of woods about Plymouth, in Massachusetts, as elsewhere, and must have been the first flower to salute the storm-beaten crew of the Mayflower on the conclusion of their first terrible winter. Their descendants have thence piously derived its name."

Each returning month of May seems to us a new creation; new sensations take possession of us; new hopes crowd the mind, at least as new as are the objects about us which excite the sensations and hopes. It is not vegetable matter alone that is quickened into life, but the animal kingdom, from insect to man, seems equally affected by the new phase of existence.

All these interesting changes of the seasons are only a part of the stupendous changes which are constantly going on. "Man himself is changing. Intellectual, refined, and living more by his ingenuity than by his strength, he is a different being from the savage, in whom passion and physical force are the chief traits. This change in man is also

now going on more rapidly than ever. Reason, humanity, and intellectual exertion are becoming more and more prominent. In the use of the physical forces, we are just learning what it is 'to have dominion over the earth and to subdue it.' Steam, electricity, the printing press, the paper-mill, and a thousand other new arts are changing human conditions, human employments, human habits, and human characteristics. Mind is becoming more and more the standard of man. The human mind is becoming one of the great forces of creation."

It is not only pleasant to observe these ever-recurring changes in the aspects and economy of nature; but delightful to contemplate them with reference to Him who rules and guides them all. Properly observed and studied, they greatly enlarge the mind and fill it with grateful and peaceful emotions. Let each "magnify his office" in this charming month, by a prompt and cheerful attention to duty, whatever that may be.

The earth, having cast off her wintry vestments, is now, by power of frost and snow and heat and chemical changes, ready for the hand of the husbandman. If he sows generously, he will be likely to reap abundantly. But May demands that her work shall be done at its appropriate time, when wind and sun and rain shall exert their proper influence upon the crops and bring them to perfection in due season.

THE EARLY GRAINS, not sowed in April, should receive attention in the first part of May.

EARLY POTATOES are more profitable for market than late ones. There are various ways of starting them; in a box or barrel by the kitchen stove, where it is moderately warm; in a sunny corner out of doors, covered with fresh horse manure; or in a box of fine, rich loam kept in the kitchen window, where the sun's rays will reach them.

INDIAN CORN, is an important crop. See that the soil for it is fine and mellow, and well manured. Select the seed with care, using only that which was perfectly ripened and reject the tops of the ears.

WHITE BEANS, pea beans, always command a remunerating price. Leave a space for this crop, and have eight or ten bushels more than the family need, for sale. They are easily cultivated, harvested and marketed.

ROOTS FOR STOCK.—We should feel as though neglecting a duty if we omitted to urge the cultivation of roots. Try them in a small way, at least. Let the rows be nearly three feet apart, and the plants, if mangolds, beets, or ruta bagas, at least twelve inches apart in the rows. Mr. Gregory, in his excellent report, says even more than that.

WEEDS.—Do not allow these to get ahead of the crops. It will be an up-hill work if you do.

PRUNING.—Let this work go until the middle of June, or any time in October.

THE GARDEN.—Make it rich and stock with a variety of vegetables, such as peas, string beans, shelled beans, early potatoes, cabbage, beets, carrots, parsnips, cauliflower, onions, &c., &c., all of which, with your excellent salted pork, will make healthful and economical dinners and breakfasts, the succeeding mornings, fit for any one to feast upon. It will be found convenient and economical, and save cash which would otherwise be expended for fresh meat.

PLOUGH deep—pulverize thoroughly—manure generously—be death on weeds—tend the crops faithfully—keep up a calm and happy temperament, and with the blessing of Heaven upon your efforts, you will reap abundant and paying crops.

MANURE HEAPS IN THE FIELD, IN THE SPRING.

It is a common practice to haul manure from the barn to the fields, and leave it there in large heaps. Some persons do this in the winter by the use of the sled.

Manure left in this condition should have more care than it usually receives. It should be kept from exposure to rain and the sun, else more of its salts than ought to be spared will be washed out, and its gases evaporated.

It is common to overhaul these heaps and break up the lumps and mingle the whole. A large proportion of farmers do this but once; others twice, and some three times.

This is an important and greatly economical operation. When it has been thrown over and laid up lightly, it soon begins to heat, especially if the weather is moist and warm. Great care should now be observed not to let

it ferment too much, because an excess dissipates its most useful qualities. Indeed, all the warmth it ought to acquire, is just enough to make it drop apart when overhauled, so as to make it fine.

Mr. Coke, a distinguished English agriculturist, discontinued fermenting manure, and stated that the crops were as good as ever, while the manure went *twice as far*. The reference, we suppose, was to manure that had been highly fermented; this process we have always considered as decidedly injurious.

When placed under the soil and contiguous to the roots of plants, unfermented, the roots secure the benefit of the fertilizing fluids or gases which come from it in the course of fermentation, while the heat evolved renders the soil about the roots a sort of hot bed.

A *slight* fermentation previous to use is undoubtedly useful, as that commences the process necessary to make the manure impart its fertilizing properties, without at all impairing them.

The process of overhauling is an important one. It should be done as rapidly as is possible and do it well; that is, to make it fine. This may be done more thoroughly at the second overhauling. A third overhauling will be economical in manure fresh from the stalls.

When the heaps are finished up, thrust a stick or two, of an inch in diameter, into each heap, and after three or four days draw them out and feel of them to ascertain the degree of temperature attained. If quite sensibly warm to the hand, overhaul again, and make the heap a little more compact. In this way the heap will become so fine that it may be easily applied, spread evenly and thoroughly mingled with the soil, where the roots will be sure to find it.

When a heap is finished, cover it slightly with loam and little or no loss will occur by evaporation.

SUNRISE FARMING.

So much is said of farming at the West, that we have been interested in looking over some statistics of down East farming, collected by the Editor of the Presque Isle, Aroostook county, *Sunrise*, a newspaper printed but a little south of the 47th parallel of northern latitude. The *Sunrise* says, "the soil of Aroostook county lies upon a strata of argillaceous slate which is continually decomposing by the action of the elements, and forming the richest and most productive soil in the world. Hence our farms do not 'run out,' but produce year after year the largest crops without any perceptible diminution in amount. The farms referred to below are not all of the largest, or their owners the most skilful cultivators. Others quite as skilful and successful might be added to the list. We have collected such statistics as we conveniently could." The statistics embrace the details of fourteen farms in the town of Presque Isle, twelve in Easton, sixteen in Maysville, seven in Dalton, five in Castle Hill, eight in Mapleton, six in Patten, four in Sherman, and four in Washburn,—76 farms in all, comprising 5337 acres of mowing, tillage and pasturing, the products of which were as follows;—

2,900	tons of hay, estimated at	$10 00 per ton,	$29 000
2,790	bus. wheat at	2.00 per bus.	5 480
693	" corn	1.50 " "	1 089
26 631	" oats	.50 " "	13,365
24,731	" buckwheat	.50 " "	12 075
573	" beans	3 00 " "	1 6 9
20,260	" potatoes	.25 " "	5 165
28 531	lbs butter	.40 per lb	11,412
7,190	" cheese	.15 " "	1 078
13,500	" clover seed	.25 " "	4,390
6,,536	" pork	.15 " "	9 380
			$94 813
	Less paid out for labor,		7,759
	Leaving		$87 054

to be divided among 76 owners of the farms for their own time and labor, which is equal to $1,145 each, on an average. When it is remembered that there are other products from these farms than those enumerated, such as roots of all kinds, minor articles of the garden, dairy, &c., we think it doubtful whether a better showing can be made of the income of an equal number of farmers, and of an equal number of acres in the Sunset land of rolling prairies and oak openings.

NEW PUBLICATIONS.

HOW CROPS FEED. A Treatise on the Atmosphere and the Soil as related to the Nutrition of Plants. With Illustrations. By Samuel W. Johnson, M. A., Professor of Analytical and Agricultural Chemistry in the Sheffield Scientific School of Yale College; Chemist to the Connecticut State Agricultural Society; Member of the National Academy of Sciences. New York: O. Judd & Co. 1870.

This volume is the second of a series of four volumes,—of which *How Crops Feed* was the first,—that the author proposed to write; the third, to treat of Cultivation, or the Improvement of the Soil and the Crop, by Tillage and Manures; and the fourth of Stock Feeding and Dairy Produce. We are pleased to learn that our favorable opinion of the first volume is confirmed by a large sale in this country, by its republication in England, under the editorship of two of the professors of the Royal Agricultural College at Cirencester, and by its translation into German, on recommendation of Prof. Von Liebig.

The present volume is divided into two parts; the first discusses the relations of the atmosphere to vegetation, the second is a treatise on the soil. To most readers the principles and office of atmosphere and soil are abstruse subjects, and the au-

thor, while confessing that the collection and arrangement of the facts stated in the volume, and the development of their mutual bearings, have cost him much labor, honestly tells the reader that he must pay a similar price if he would apprehend them in their true significance. Still we know of no writer on the science of agriculture who has the ability to arrange and express these facts in so familiar and clear a manner as the author of this book.

CABBAGES: How to Grow them. A practical treatise on Cabbage Culture, giving full details on every point, including keeping and marketing the crop. By James J. H. Gregory, Introducer of the Marblehead Cabbages. Salem, Mass. 1870.

The great practical experience of Mr. Gregory in the subject to which this pamphlet of seventy-two pages is devoted, enables him to give details which will be of great value to the less experienced cultivator. He informs us that the object of this treatise is to answer the numerous inquiries which have been made by his customers about cabbage raising, and that he has aimed to tell them all about it in a plain, talkative manner.

SALT AND ITS USES IN AGRICULTURE. A Lecture before the State Board of Agriculture at Pittsfield, Mass., by Charles A. Goessmann, Ph. D., Professor of Chemistry in the Massachusetts Agricultural College. Dec. 7, 1869. Also Contributions to the Chemistry of Common Salt, with particular reference to our Home Resources, by the same author.

These two little pamphlets furnish a great amount of information in relation to salt and its uses. The conclusions of the author are not favorable to the use of salt as a promoter of vegetable growth. He says the safest and cheapest way of supplying salt to farm lands is to feed it to stock. The benefit reported from the use of refuse salt he thinks is often due to that refuse matter, rather than to the salt itself.

For the New England Farmer.

THE GARDEN IN MAY.

Farmers may enjoy the luxury of a pretty, as well as a profitable garden, if they will only take a little pains. To secure this, the women of each household may do much by seeing to and planning for the ornamenting of the garden; and as but a small portion have separate plots for flowers, &c., good taste will soon suggest the way of uniting beauty with utility, —flowers with vegetables. How much it improves the appearance of the garden to have all crops arranged so that one may set off the other, and each may show to the best advantage. Let the bean poles be straight and of even length, and set in line; the pea brush be neatly pressed and set with the flat sides lengthways of the rows, their tops neatly woven together; and everything arranged in neat, regular order, economizing space, without crowding.

Many tender plants may be forwarded so as to gain several days or weeks, in time of maturing, by a little trouble in protecting with light frames covered with gauze or glass, boxes, &c. If, after planting, a rain falls and the ground becomes crusted, it facilitates the appearance of the tender shoots to loosen and pulverize the crust gently above them, using care not to injure the plants. A mellow surface soil is most favorable to growth at all times, and the ground should be often stirred to admit air, warmth and moisture to the soil below. To obtain the greatest profit and good from a garden, we must plan to have a succession of crops on the same soil—lettuce between carrot and parsnip rows, radishes among melon and cucumber hills, cabbage between early potatoes, and late crops to follow early ones, in a similar way.

ASPARAGUS.—Cut every shoot as soon as it rises to sufficient height for the table, by which means the season of cutting may be prolonged. In cutting, use care not to injure the young shoots beneath the surface.

BEANS.—Plant bush varieties early. Dwarf Indian Chief, Valentine and the Princess are good varieties. Pole beans are more tender and less easily protected, and should be planted later. Set the poles first, four feet apart each way, and plant the beans around the poles, three or four inches away, five or six seed to a hill. Leave the Limas till the last, as they are the tenderest and most difficult to start. In planting Limas, stick them eyes down, and cover only half an inch with fine, mellow soil. The soil around the poles and in the hills should be a little higher than the common level, to shed the water.

BEETS.—The early sown should now be up. Seed may still be sown for summer and fall. Early Bassano, earliest of all, early Blood Turnip, Crapandine and Long Blood, are good varieties.

CABBAGE TRIBE.—Borecole, Broccoli, Cauliflower, Kohl Rabi, Kale and Cabbage seed may be sown in rich, well prepared beds in the open ground for medium and late crops. Transplant from cold frames and hot-beds into rich, mellow soil, well prepared. Examine the roots for cutworms and see that the plants are free of insects and healthy.

COLD FRAMES.—Remove remaining plants as soon as safe from frosts, &c., and take the frames in and store for another season; good care and an occasional coat of paint will preserve them for many years.

CORN.—Plant the sweet varieties once in two weeks up to July, for a succession. Mexican Sweet, Crosby's Extra Early, Trimble's Improved Sweet, Farmer's Club, Evergreen, and Mammoth Sweet corn are the best varieties for general selection. Plant small varieties in rows, north and south, 3½ feet apart, three kernels to the foot.

CUCUMBERS.—Those started on sods in the hot-bed may be transplanted into the open ground. Plant seeds for a succeeding crop; make large hills, and put in two shovelsful of fine, rich manure, and plant plenty of seed, and at intervals of a few days, for bugs,

&c. Superfluous plants can be removed as soon as strong enough to resist bugs. A good preventive of bugs is to bend two sticks over the hills, letting them cross each other, fastening them by inserting their ends in the ground and putting a part of a newspaper over them, confining by placing dirt on the edges; this will not only give protection from bugs, but will also tend to forward the plants.

Egg Plants.--Transplant into ground well enriched with warm, fermenting manure from the hot-bed, as soon as the weather is warm and settled.

Hot Beds.—Remove all plants, paint, repair and put away sashes and frames for another season.

Insects.—Many are already on the alert, seeking what they may devour. Whale oil soap, guano water, and hen manure solutions are not only offensive to the insects, but give vigor to the plants to resist attacks; dusting with plaster or fine dust will often be sufficient. Covering as recommended for cucumbers, is almost certain protection.

Lettuce —Transplant from hot-beds, and sow seed among hills of vines, along borders of beds, &c.

Melons.—Nutmeg, Musk, Cantelope, &c. Sow seeds in large hills, as for cucumbers. Plant at distances corresponding to growth, from four to six feet.

Nasturtions.—Sow where they will be shaded from the mid-day sun. A rather moist soil is best.

Onions may still be sown, if they have very rich, mellow surface soil. They usually do best when grown on the same soil several years in succession.

Peas.—To have a succession of this fine vegetable, sow once in two or three weeks. There are a goodly number of varieties from which to select early, medium and late.

Peppers —Plant out from the hot-bed or boxes in the house, in rows two feet, and eighteen inches apart in the row; manure with hen manure.

Potatoes.—Plant early, the earlier the better; only early planted potatoes should be grown in the garden. Begin to hoe as soon as they break ground, top dress with ashes, salt and lime mixed, guano or superphosphate of lime.

Radishes.—Sow in rich, warm soil in any vacant places, and among other vegetables, thin planted. Encourage rapid growth with liquid manure.

Squash.—Plant and treat like cucumbers and melons. Early Bush and Summer Crookneck for summer; Hubbard are best for fall and winter.

Sweet Potatoes.—Plant out after the middle of the month in well enriched, sandy, warm soil, in high hills or ridges. Set the plants a little deeper than they stood in the bed.

Tomatoes.—Transplant into well enriched hills, four feet apart each way. A rather sandy soil is preferable to a heavy loam or clay.

Small Fruits, like blackberries, currants, raspberries, strawberries, grape vines and gooseberries may be moved or planted new, if done before the buds swell for leafing out. Neglected grape vines may be pruned after leafing out; other bushes and shrubs may be pruned, tied up to stakes or trellises, hoed, manured and mulched. W. H. White.

South Windsor, Conn., 1870.

For the New England Farmer.

OUR CONDITION AND PROSPECT.

Shall we Extend or Contract our Operations?—A Falling Market—Supply and Wages of Farm Labor—Productions for Home and Foreign Markets—Effects of Decline in Gold—Present and Prospective Prices of various Articles.

The time for deciding upon what crops to raise and the amount of labor to be performed this year has arrived. Farmers, like the followers of every trade, are inclined to consult the past and look to the future in order to determine their work for the year. After carefully watching current events, farmers must determine whether to enlarge or to curtail their operations. Should the rapid decline in gold, or the present state of the market suggest the expediency of any essential change from their usual course? The fall of gold to merely a nominal premium, and the resumption of specie payments, have been anticipated with considerable anxiety; for it is believed a general breakdown in prices and a serious interruption of business would follow.

However this may be, in working with falling markets farmers have some advantages over manufacturers. They are not obliged to constantly expend large sums in cash for raw material wherewith to make their goods, and thus suffer losses two ways—on stock and and the manufactured article. By far the heaviest item in the cost of farm produce is labor; only a part of which is cash out. Farmers, themselves, with their teams, perform the largest portion; and it is for the interest of the farmer to keep the home force employed whatever may be the condition of the markets.

The wages of help may not be less by the time spring contracts are made, but undoubtedly laborers will be more numerous, and better selections can be made and more efficient services will be rendered; for the supply is exceeding the demand in the cities. Notwithstanding the repeated strikes, secret leagues, co-operative movements, and all that is said and done about labor reform, wages have a decidedly downward tendency. In the majority of manufacturing establishments the help was cut down ten to twenty per cent. the first of the winter, and if their goods continue to depreciate as rapidly as they have for some time past, a further reduction may be

expected. The prospects for house mechanics are not as encouraging as last year. The demand for houses and stores has caused a remarkable activity in building for five years past, and employed a large number of able-bodied men in the erection of the buildings and in preparing the material throughout the country. A check to these branches of industry will be felt at once in the rural districts, as any depression in our manufactures will send labor back to the farm for employment.

The scarcity of farm help during the last decade can easily be accounted for when we consider the vast amount of labor that has been accomplished; the number of men required to fight the battles of our country; to prepare the implements and munitions of war; to extend and carry on the different branches of our varied industry in a full tide of unparalled prosperity; to execute the public improvements, and erect mills, factories and houses at the rapid rate that has been done. Our country will be unlike others, if with the thousands of foreigners weekly landing upon our shores the cities and manufacturing villages can continue many years longer to draw so heavily upon the farming population. Manufactures are comparatively a new enterprise, and they are seeing their palmy days. Soon the resident population around these busy hives of industry will supply all the labor they require. The rush from the farms to the village and city will be checked, and there will be a superabundance of help in the rural districts, as there was before mannfacturing interests assumed such gigantic proportions, and as now exist in the old world.

The fall of gold will affect those who raise only such crops as are exported more than New England farmers who grow other kinds and who do not supply their home markets. All that is raised here is wanted for home consumption, and the price of most articles depends on the supply rather than fluctuations at the gold board. The ruling price of vegetables was very low last year; cabbages and some other kinds brought to the producer no more than the average of prices before the war. If market gardeners made wages last season, they need not fear smaller profits this year from any direct influences of a decline of gold. Potatoes are selling at low figures. The retail price now would not have been considered high ten years ago. They have come down to old rates without much regard to the premium on gold. When the market is full of old potatoes, the new or early crop starts at low rates, and sell slowly. No man can afford to pay fancy prices for early sorts to raise them for table use. Early Rose are now quoted at one dollar and less per bushel in New York. Too many are trying to make money by raising early potatoes. The late crop may pay as well this year. Corn may fall considerably, and still a profit can be made by growing it, even in New England. There will undoubtedly be a larger area planted this spring. Flour is selling lower than it was before the war, according to the rate of wages; that is, mechanics and laborers can earn a barrel quicker now than they could then. It is ascertained that less winter wheat has been sown than in 1868, though the prospects of a large foreign demand for American grain are unusually good. Barley, oats and rye will pay even at lower rates, if the raiser is near a market and sells the straw at an advantage.

Meat has not fallen with gold and the price of grain; beef sells this winter as high as it did when gold was 2.50. Our neat stock was diminished by the war. That loss is not yet made up. Nearly every State in the Union is laid under contribution to supply our markets. The demand for choice pieces of beef increases, and there is every prospect that beef will command good prices for some time to come. Owing to the decrease of sheep at the East, and to a more general use of mutton, we need not fear a material fall in this. Pork sells for about one hundred per cent. more than it did in 1860, while the cost of the material for producing it has not advanced in the same ratio. This profit, and the tact that swine can be multiplied so rapidly may cause a decline in pork before long.

Our markets, through the increase of population, are yearly calling for more and more, and there is little danger of an over supply in any of the staple crops. The prices of all our crops depend more, in fact, on the season than on an inflated currency, or on the resumption or no-resumption of specie payment. For the last seven years the products of the dairy have sold remarkably well; cheese manufacturers have been surprised at the results of their labors. The high prices of these articles have placed them among the luxuries of many families, and *should* there be a slight fall the producers will have no cause to complain. Eggs and poultry sell quickly, and farmers cannot say that consumers do not pay enough for them. The annual consumption of eggs is truly surprising. A few years ago New England supplied her own markets; now eggs are brought here from West of the Mississippi; but commission merchants may bring them from whatever distance they please, still, that which is produced nearest our markets, if carefully prepared, will command the highest price and quickest sale. The demand for well cured hay is increasing faster than our farmers are preparing to sell. Its price appears to be regulated solely by the amount produced and by the price of grain. N. S. T.

Lawrence, Mass., March 10, 1870.

—An English writer thinks the American early potatoes will come to an end ere long, for as each new variety is claimed to ripen about ten days earlier than any other, the time between planting and digging will soon be used up.

COAL ASHES.

Coal-beds were once peat-beds—such at least is the verdict of geological science. The ashes of coal, like those of peat, consist chiefly of the clay or soil which was mingled with the decaying mass of vegetation, rather than of the ash ingredients of the plants themselves.

Peat is so long soaked and leached with water that it usually contains very little alkalies, phosphates, or other matters that remain when it is burned, which have fertilizing value. The same is true of coal in a higher degree.

The ashes of coal, in general, have the composition of ordinary (burned) soil. They contain phosphoric acid, sulphuric acid, lime, magnesia, and potash, but commonly in small or very small proportion.

In the years 1849 and 1850, very complete analyses of three kinds of coal ashes were made in the Yale Analytical Laboratory, at the instigation of Professor J. P. Norton. The results are here given:—

SOLUBILITY.

	Anthracite.		*Bituminous.*
	White ash.	*Red-ash.*	
Soluble in water	3 74	3.35	3 41
" " hydrochloric acid	7.58	11.00	8.53
Insoluble in water and acid	88.68	85 65	88 06
	100.00	100.00	100.00

COMPOSITION.

Insoluble silicates	88.68	85 65	88.06
Soluble silica	0.09	1.24	1.06
Alumina	3.31	4 24	1.96
Oxide of iron	4.03	5.88	1.59
Lime	2 11	0.16	4.46
Magnesia	0.19	2.01	none.
Soda	0.22	0.16	0.76
Potash	0.16	0.10	0 52
Sulphuric acid	0.87	0.43	1.10
Chlorine	0.09	0.01	0 29
Phosphoric acid	0.20	0.27	none.
	99.95	100 10	99.80

Coal ashes are occasionally richer in one or several valuable elements. Lime has been found as high as 19 per cent.; sulphuric acid, 10; chlorine, 9; magnesia, 5; potash, 2¼; phosphoric acid, 1¼ per cent.

We see, then, that the soils which are naturally mixed with coal, and which remain, after burning, as ashes, are as variable in composition as the soils which are now in cultivation. Hence, some coal ashes are nearly worthless, while others are very good as a fertilizer. There is no necessary connection between the name of a coal or the locality where it is mined, and the fertilizing value of its ashes, as from two parts of the same lump of coal may be obtained, in one case, a red ash, and in the other a white ash; so one may give an ash rich in sulphate of lime, while the other may be destitute of that ingredient.

There is a reason, often overlooked, which may in part account for the varying opinions held by those who have used coal ashes.

It often happens, in kitchen ranges, that so much wood or charcoal is used for kindling the fire mornings and for aiding it during the day, that the ashes which collect contain enough alkali, etc., to act efficiently and strikingly as a fertilizer. The reputation of coal ashes cannot properly rest on the use of such a mixture.

On soils whose texture is too open, on light sands which hold neither water nor manure, the use of coal ashes is a great benefit, mechanically, by occupying the cavities or spaces between the grains of sand with fine matter, and thus giving to the earth more retentive quality. Had I a farm of such hungry soil as the coarse sand of New Haven plain, I should be thankful to get it dressed two inches deep with coal ashes, even of the poorest fertilizing quality, in order, by ploughing them in, to puddle a soil which drinks up the rains in a trice, and, after a few hours of summer sun, is dry enough, if not usually fine enough, except where ground by travel, to rise in the wind and become floating capital rather than real estate.

The good effect of coal ashes in thus bettering the texture of hungry soils may often be greater than that of a tolerably good fertilizer. This is a fact of capital importance, which, though demonstrated by plenty of sound facts, is not sufficiently understood.

By coal ashes I mean *ashes*,—not slate, clinker, broken bottles, worn-out teapots, blacking-boxes, old shoes, and small coal, but the fine ashes, such as get in one's hair when we shake out the grate in the morning, or, at least, such as will pass a sieve of twenty meshes to the square inch.

When the farmer reports that coal ashes are good or otherwise, he should mention what kind of coal they are obtained from, and state whether or not they are mixed with other matters which have a fertilizing action.—*Prof. S. W. Johnson, in Hearth and Home.*

HEALTHY CHICKENS.—A correspondent of the *Rural New Yorker* says:—The way I keep my fowls in health, I clean out the house once a week; put wood ashes under the roosts; have iron basins for them to drink from; whitewash inside of hen-house with hot lime; put a little kerosene oil on the roosts once a month. The main food is oats and cake of scraps to pick on. I never feed but once a day—at noon, or when I shut them up at four or five in the afternoon. When they run out then give them all they will eat. In my experience there is no easier way to get diseased fowls than to keep them stuffed; it makes them lazy, and they won't work as much as they ought to to keep in a healthy condition. I never had any gapes in chickens. When fowl begin to droop I give three large pills of common hard yellow soap; it is the best thing to cleanse a fowl I know of. I follow it for three days; give them nothing to eat, and plenty of pure water to drink. In desperate cases give a half teaspoonful of tincture of lobelia.

EXTRACTS AND REPLIES.

BARN ITCH—PEMPHIGUS, OR VESICULAR ERUPTION—SCRATCHES.

I would like to inquire, through your columns, the cause and remedy for the barn-itch? My stock is troubled with it more or less every year, commencing soon after stabling. It troubles my working cattle much more than those giving milk.

Please tell me, also, a sure remedy for the scratches on horses? L. J. N.

Cheshire, Mass., 1870.

REMARKS.—The term, "Barn-Itch," is a common one among farmers, and the disease known by that name is not an unusual one. But we cannot find in any of the books which we usually consult as authority, the term "barn-itch" used. Even in Allen's late and excellent work, *American Cattle*, we find no allusion to "barn-itch," nor is any disease spoken of which would indicate it to be of that nature.

It has required considerable research and thought to come to any conclusions as to what the disease "barn-itch" is, and when found, how it ought to be treated.

What *causes* the itching is not easily determined. It may arise from an impure state of the blood, from contact with some poisonous substance, or, as in the case of common itch in human beings, by the entrance into the skin of minute parasitic insects.

The surface of the skin of the ox and cow is covered with small vesicules, or bladders, which vary considerably in size. From some cause these become enlarged, are filled with a watery fluid, and occasion a most annoying itching. There are other symptoms, also, which are quite marked, and are termed, "Pemphigus, or Vesicular Eruption," and this disease, it seems to us, from the investigations made, is very similar to or the same as barn-itch. Sometimes, when the disease has advanced, the vesicles, or bladders of which we have spoken, burst, and a serous or watery fluid dribbles from them and sticks the hair together, or takes it off and leaves bare patches of the skin.

In symptoms like these, Dr. Dadd, in his "Diseases of Cattle," recommends the application of the following mixture:—

Glycerine	4 ounces.
Sublimate Sulphur	1 ounce
Lime Water	8 ounces.
Linseed Oil	2 ounces.

Two or three applications of the above, he says, on successive days, will soon change the morbid action of the skin, when what is left remaining upon it may be removed by a sponge and warm water.

A correspondent of the *Country Gentleman* has used the following with complete success:—Take hog's lard or any soft grease, and stir in sulphur until it is quite thick, with which anoint the parts affected—twice is generally sufficient.

We shall be glad to have our correspondent send us the precise symptoms attending the itching of his cattle.

The late Paoli Lathrop, of South Hadley, Mass., who was a distinguished stock raiser, recommended the following as a positive remedy:—"Take a cob and rub the affected part until the surface is smooth, and then apply grease as an emolient."

The same remedy, he said, is always efficient for the scratches in horses, unless the disease proceeds from some general disorder in the system of the animal, in which case other and more efficient means must be used.

From personal experience, we know that this treatment will remove scratches; but the feet and legs must be kept dry and clean, while in the stable, and washed each day with warm water and castile soap.

WORMS IN HORSES—THE CATTLE ITCH.

Can you inform me through the columns of the NEW ENGLAND FARMER a sure remedy for worms in horses? I have a valuable colt thus afflicted.

Some of my neighbors have cattle troubled with a kind of disease taking their hair off around their eyes. I don't know the name of this disease, but it seems to be a kind of an itch.

A DOWN EAST SUBSCRIBER.

Columbia, Me., 1870.

REMARKS.—A gill of clean wood ashes, mixed with wet oats or corn meal, every other day for ten days, has always been effectual in the treatment of our horses. If this does not succeed, give emetic tartar, with ginger, made into a ball with linseed meal and molasses, every morning for three or four mornings, and half an hour before the horse is fed. Or, this failing, give an injection of linseed oil, or of aloes dissolved in warm water, and you will be likely to start out some thousands of the small white pin worms.

We would also remind you of an article published last year, page 87 Monthly FARMER, in which Mr. Haserich recommends the use of lard. He says that the pin worm breeds, not in the intestinal cavities, but outside the folds of the sphincter muscle, where it lays its eggs, which hatch in five or six hours. If the exterior orifice is kept thoroughly greased with lard a few days the worms cannot fasten their eggs, and breeding stopped the worms disappear.

See article in another column, entitled, "Barn-Itch," for the unknown disease you speak of.

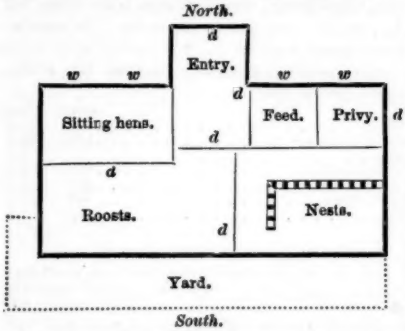
PLAN OF HEN HOUSE.

I design building a hen house, and want it on the most approved plan. Will some of your correspondents, interested in keeping hens, give me some information or a plan for building, through your paper. ALBURGH SUBSCRIBER.

Alburgh, Vt., Feb. 25, 1870.

REMARKS.—Last year,—see Monthly FARMER, page 85,—we published a perspective view and plan of a convenient but cheap poultry house designed, built and used by the Senior Editor of the FARMER. We now copy from the new work on

Barns, Outbuildings and Fences, by Geo. E. Harney, a notice of which appeared in our last paper, the outlines of a poultry house that Mr. Harney recently built for a gentleman near the village of Cold Spring, N. Y., where he resides. Our printer's rules fail to reproduce the beauty and completeness of the fine lithographic plan from which we copy, and we make no attempt to print the pretty picture in which the building itself is presented. This you will find in book referred to.



The following is an abridgement of Mr. Harney's description of this building. The southern front is nearly all glass. The entrance is on the north side, the door opening into an entry seven by nine feet. On the right is a room, seven by twelve, for sitting hens, and on the left a closet for feed, fitted up with rat-proof boxes or bins. The roosting-room is ten by nineteen, and has inclined roosts, placed about twenty inches apart, and room in front for feeding. The laying room is ten by twelve feet, and has thirty-two laying boxes placed on wide shelves in two tiers and has sheltered entrances on the side towards the glass front. There are doors at the rear of them for taking away the eggs. In one corner of the building is a privy belonging to the dwelling-house. This building is frame, battened, and has a slated roof. The walls are filled with bricks and mortar, and are lathed and plastered, as are also the ceilings. The floor is grouted-up and cemented. The yard embraces about an acre of land, and is surrounded by a picket fence eight feet high.

PINE SAWDUST FOR BEDDING—A SLEEPING HORSE.

Friend, please give through the columns of the FARMER, the best information with regard to pine sawdust as bedding for horses and cattle, and its effect on the manure and soil. It causes the manure to heat very quick, which I fear is a damage.

And whether anything can be done to a valuable horse, in his seventeenth year, that sleeps in the harness, whenever stopped. This sleepiness has come upon him mostly during the last year.

JAMES WEST.

Abington, Mass., 2d mo. 21st, 1870.

REMARKS.—We regard sawdust as a good bedding; but probably pine dust, aside from its power of absorption, is about the poorest of all the woods. Pine wood makes but little ashes, and what it does make is worth but little for lye, as it contains only 15 per cent of potash, while elm contains 30 per cent., according to analysis. We are aware that it has been thought by some that manure containing sawdust is more infested by noxious insects than other manures, and some have even claimed that it was injurious to the soil, but we have seen little evidence of the correctness of such conclusions. Our correspondent is correct as to its causing the manure to heat. An old correspondent of the NEW ENGLAND FARMER, who used 100 cords in nine months, prevented fire-fang by turning water enough upon it to keep it moist and cool, and keeping it in as solid a body as possible until he drew it out, when it was put in flat heaps, two or three cords in a place, and a foot thick after being well trodden down. Mr. Moses H. Hussey, of North Berwick, whose potatoes and other crops we noticed a few weeks since, informs us that he has used the manure from a horse stable bedded with sawdust, on which about as many hogs are kept as there are horses in the stable. He says that he is well satisfied with this manure; prefering it to manure from horses bedded with straw, especially for heavy soils.

For your sleepy old horse we have a "fellow feeling." We, too, are growing old, and sometimes find ourselves "sleeping in the harness." Our sleepiness has come upon us, as upon your horse, recently. When younger we almost envied the ability of the older people to take a nap as we rested a bit after a luncheon in the shade of the old elm. But now, when we stop for a few moments after dinner, we often feel the presence of "tired nature's sweet restorer, balmy sleep." A little bite of something to eat, while stopping, may have a tendency to keep your horse awake. We hope some reader of the FARMER will give you a more satisfactory reply.

THE WEST THE PLACE FOR FARMING.

Some of the Eastern papers represent many of the farmers of the West as homesick. After farming it five years at Watertown, Mass., I came to Northwestern Iowa. I do not wish to go back, nor is there one in fifty of the farmers here who could be induced to return. The West is far ahead of the East for farming. I came here in 1866, dug a hole into the side of a bluff and put up a shelter. In two years' time I had as good a house as there is in Harrison county. I have 250 head of cattle, 80 sheep, 40 hogs, 8 good work horses, 5 colts, 4 oxen, 90 hens, carts, wagons, &c. Planted 50 acres to corn and 90 acres to wheat. Corn 60 to 70 bushels per acre; wheat 76, [?] though put back by the wet season last summer. Land can be bought at $2.50 per acre; cultivate it two or three years and sell it for $20 an acre. It costs little to raise stock here. Turn them out in the spring to run till fall, then put them to your haystacks or stalkfield. That's the way we make our money. We are only sixteen hundred miles from Boston—time four days, fare $42 to Council Bluffs. I have three brothers here, who are doing well, though they came with nothing to start with. We have a good market for everything we raise. I can make much more money here than at the East with half the hard work.

Please put this in the NEW ENGLAND FARMER and let Eastern men who don't know whether farming pays, see that we have a great country to live in, and come out and learn how to farm it. We can show them. NATHAN S. CHASE.

Magnolia, Iowa, Jan. 26, 1870.

REMARKS.—That's a good hearty letter,—not a streak of the blues or fever and ague any where to be seen. We venerate the first settlers of all new countries. Men who erect buildings for others to live in; dig wells for others to draw cool water from; subdue fields for others to cultivate; make roads and bridges for others to ride over; drain marshes that others may breathe pure air, and generally prepare the way and lay the foundations of a prosperous community, are entitled to more credit and honor than they generally receive. We therefore very cheerfully comply with friend Chase's request to copy his letter.

SEEDING FOR PASTURE.

As I am about seeding some land into pasture, I would like some information through your paper. Some advise me to sow Redtop, others think it better to sow different kinds of seed. Will you inform me which would be the best kind of seed to use? A READER.

Northboro, Mass., Feb., 1870.

REMARKS.—Pastures require grasses that do not come forward at the same time. There should be early, medium and late grasses, so that the stock may always find that which is in a suitable state of growth for them. This cannot be secured by sowing one or two kinds of seed only. The June grass, for instance, would blossom and become dry, perhaps, before the Redtop would blossom in July. The Meadow Foxtail and Orchard grass would flower in May and June; the Redtop in June and July; the Timothy in June and July, and White Clover from May to September.

VALUE OF CORN COBS.

Can you inform me whether there is any nutritious matter in corn cobs to feed to stock, ground separate, or as is more usual, ground with the corn. A. COTTON.

Woburn, Mass., Feb. 23, 1870.

REMARKS.—There was quite a spicy controversy on the value of cobs ground separately and with the corn, in the FARMER for 1868. The Monthly edition ought to be in your town library. You will there find different views expressed—some believing the cob valuable, others that it is even worse than useless. One advocate of corn cob meal thought that those who realized no benefit from it did not feed it right. Sufficient hot water should be turned upon the meal to scald it the night before feeding. Thus treated, he considered it valuable. Another said it was too expensive to grind cobs, but that they were valuable when boiled, and that the water in which they were boiled was also very nutritious. But as farmers disagree among themselves, we will copy from Prof. Johnson's book on How Crops Grow the following results of analysis of the ash of corn, of corn stalks, and of corn cobs, showing the per cent. of several of the constituents, as follows:—

	Corn.	Corn Stalks.	Corn Cobs.
Ash	1.42	5.49	.86
Potash	27.0	35.3	47.1
Soda	1.5	1.2	1.2
Magnesia	14.6	5.5	4.1
Lime	2.7	10.5	3.4
Phosphoric Acid	44.7	8.1	4.4
Sulphuric Acid	1.1	5.2	1.9
Silica	2.3	33.0	26.4

Another table gives the water, organic matter, ash, albuminoids, carbohydrates, crude fibre, fat, &c., in the corn and in the cobs. The term organic matter signifies the combustible parts of the plant; carbohydrates, &c., includes fat, starch, sugar, pectin, &c.

	Corn.	Cobs.
Water	14.4	10.3
Organic matter	83.5	83.2
Ash	2.1	2.8
Albuminoids	10.0	1.4
Carbohydrates, &c.,	68.0	44.0
Crude fibre	5.5	37.8
Fat, &c	7.0	1.4

MANURING WITH CLOVER.

Can we get a suitable crop of clover to plough in on worn out land, without manure to start the clover? How much seed to the acre? Should it be ploughed under when in the blossom, and how deep? Is the spring the best time to sow the seed?

Craftsbury, Vt., Feb. 9, 1870. G. N.

REMARKS.—On land pretty thoroughly impoverished, it is not probable that much of a crop of clover would be produced at once. If none can be had, however, plough the land twice at least, once in the fall and again in the spring, and work it over with some lifting implement, such as a horse-hoe, or cultivator, until the mass of the soil has been thoroughly mingled and made fine. Sow in the spring as soon as the soil is mellow, 12 or 15 pounds of clover and plough under the crop when the blossoms commence to dry.

The crop on exhausted soils will be small, of course, but it will be the foundation for another and larger one, and so on until the field will produce a ton or more to the acre. With good treatment the land will then be in condition to produce fair crops for a hundred years in succession. If four hundred pounds of the flour of bone, were added to the acre, a pretty fair crop of clover might be expected the first year, on sandy or clay loams.

CATTLE DISEASE IN SOUTHEASTERN MASS.

By the questions I see asked in the FARMER, I suppose it is thought that editors know almost everything. So I want to ask you what ails my cows. I bought a heifer that came from the country a year ago last fall. She did well all winter, and dropped her calf April 1st. She gave a good mess of milk,—some days twenty-five pounds. Along the last of July she began to dry away in milk. I fed her a variety of fodder, such as corn stalks, pumpkins, small potatoes, small corn, some barley and witchgrass, &c., the same as I did another old cow I was fattening. When I gave her anything new she would eat it as though she liked it for a week or ten days, then would not touch it. She appeared all the time as if she wanted something she could not get.

I never gave her more than four to six quarts of roots or one quart to three pints of oats or meal at one time. I gave her bone meal once or twice a week with the same result. I tried both English and salt hay. She would stand with her head down and back up. About four years ago I lost a cow with about the same symptoms. I dont keep but one cow. I am trying to raise the calf, but she seems to have the same trouble about eating.

Chatham, Mass., March 8, 1870. S. A.

REMARKS.—People ask questions in the FARMER not because it is thought that the editors know everything, but because the editors can put these questions before an immense number of readers, some of whom it is presumed can answer them. In another column you will find a statement in relation to a disease which we mistrust is the same as that of which you inquire. In some parts of Southeastern Massachusetts it prevails to an alarming extent, and should at once be examined into by men qualified for the task.

STORING VEGETABLES IN CELLARS UNDER THE DWELLING.

HON. SIMON BROWN:—*Dear Sir*,—It is still a practice with some farmers,—I hope with but few,—to store vegetables in cellars under the dwelling. To do something to put a stop to the practice by the few who still persist in it, I addressed a note to Dr. Bowditch, and received the enclosed reply, which needs no comment from me. I think you will do well to insert it in your most valuable paper. D. B. FLINT.

Boston, Feb., 1870.

Having been requested to give an opinion concerning the effects upon health caused by storing vegetables in the cellars of occupied dwellings, we would reply:—

1st. That while such vegetables are *entirely* free from decay, the practice is probably harmless.

2d. It is perfectly certain that decaying vegetable matter gives rise, in a way which science has not yet fully explained, to exhalations which are poisonous, that they taint the air with which they are in contact, that they seem to invite the attack of epidemics, that they diminish the power of the body to resist disease of every kind, and that they are especially favorable to the production of fevers.

3d. That the air of a cellar cannot be prevented from passing throughout the building under which it is placed.

For these reasons we are of opinion that the practice of storing the produce of the farm in the cellars of dwelling houses, is always attended with danger, and ought to be given up, since the utmost care is required in the course of our long winters, to prevent decomposition from taking place.

Signed

HENRY BOWDITCH, M. D., GEORGE DEBBY, M. D., R. T. DAVIS, M. D., *Members of the Mass. "State Board of Health."*

SWAPPING COWS.

I am an amateur farmer, and cultivate a "little place out of town," and one of the appurtenances thereto belonging is a three-year-old heifer, that I purchased when a yearling, and having made quite a pet of her, we hate to part with her. But one of my neighbors who has "farmed it for forty years" tells me she is not worth keeping. I desire to tell you just her offence, and then if you please, give me your opinion concerning her.

She gave birth last June to a nice heifer calf, and through the summer gave nine quarts of milk per day, of excellent quality. In the fall she fell to six quarts, and through the winter, up to date, has given five quarts. She has one pint of meal twice a day, made into porridge, and given warm; hay cut and steamed, and three times a week one peck of carrots. Now my neighbor tells me that with the care she gets she should yield twice as much, and I desire to know whether I am making a mistake or not. She is now with calf and comes in July first. AMATEUR.

Medford, Mass., March 6, 1870.

REMARKS.—Nine quarts of excellent milk, and only a three-year-old heifer. Keep your pet by all means, at least another year, and compare her yield and the quality of her milk with that produced by your neighbor's cow that *is* worth keeping. Lincoln's story about swapping horses in the middle of the stream, has a moral for you.

SOWING WHEAT—PREPARATION OF SEED—YIELD.

As the low price of flour may cause some Vermont farmers to neglect the wheat crop the coming spring, allow me to suggest some reasons for extending its cultivation. Wheat adds one crop in rotation; it increases the aggregate income from our farms; it saves paying out our money for flour; with clean wheat and good flouring mills we produce a better quality of flour than the average of that for sale; we get better grass in seeding with wheat, to say nothing of the pleasure one feels in eating bread of his own raising.

In raising wheat as well as all other grain, farmers begin to realize the necessity of sowing perfect seed; and many plans have been suggested for securing this result, such as selecting the best heads, &c. The plan I have pursued for four years with very good success is this:—I take out all the small and imperfect kernels of wheat with one of "Sanford Adams' wheat screens;" then wash in strong brine, and sift in as much air slaked lime as will adhere to the wheat. The result is no smut, a larger yield, larger berry, and an increase in quantity and improvement in quality of flour. I sow the variety known as the "Dodge Wheat." My largest crop was forty-five bushels per acre; average for four years thirty-five.

Cabot, Vt., March 4, 1870. A. M. FOSTER.

SAP SPOUTS AND TAPPING.

As the sugar season approaches it is in order for us first to determine what we will use, then to get our fixtures in readiness. There are a great variety of spouts recommended. One says use round tin spouts driven into the bark. Many tap soft maples, more or less. With such spouts driven into the outer bark of that tree, the sap comes in contact with the coloring matter of the inner bark, and is so discolored as to injure both the flavor and appearance of the sugar.

Spouts that are driven sufficiently firm to hold a bucket of sap, require a larger hole than would otherwise be necessary; and most of them cover too much of the outer surface of the wood where the sap flows most freely. Another objection is that many of the improved, as well as the ill-shapen, old-fashioned spouts, require a deeper hole than we can afford, now that our trees have become valuable.

I prefer setting to hanging my buckets. The time and expense necessary to fit the buckets and spouts or spikes for hanging is sufficient to arrange blocks, or stones, for the buckets to stand on, which, with care, will last for years, or an age. It is common to see buckets small at the bottom, hanging "breast high," with the side next the tree

inclining outwards to such a degree that a bucket of fourteen quarts capacity will waste all over ten quarts. Other buckets small at the top, are seen in about the same condition, careened up by the wind in exposed positions, with the sap dropping rapidly on the top hoops and dripping from the bottom.

I do not tap a tree in the smaller dimensions of its body, but in the larger parts, near its base, where observation shows that less grains are cut, and experience fully proves that the wound will heal much quicker, and where, if necessary, I can insert two spouts, with less detriment apparently to the tree than one several feet higher.

I use Sumac or other wooden spouts. For the benefit of others, I will give my method of fitting them:—With a common plane and a hard wood stick three inches long, one inch thick and one and a quarter wide, I make a spout sharpener. In the first place I work a hole through one side of the stick of the size and taper I wish the end of the spout to be when finished. I then plane down one edge of this stick so as just to cut into the hole. It is then placed on to the face of the plane with the hole over the cutting iron, so as to work like a pencil sharpener, and screw it firmly to the plane. Now, by putting the end of an old spout into this hole and giving it two turns it is fitted perfectly. New spouts, after being roughly sharpened, are finished in the same way. An active man, or even a boy can finish from thirty to forty in a minute, in the most perfect manner imaginable. They are 75 per cent. cheaper than any so-called, "Improved Sap Spouts," require only half-inch hole by five-eighths deep, and when necessary one turn of the tapping bit (a tapering bit) will rim the entire surface, which give a fresh flow of sap.

We all have our preferences, but let us avoid hasty conclusions and not buy new things merely because they are new or novel, nor leave the "good old way" until we are sure of a better. If there is any way that is better in all respects, let us have it. O. C. WAIT.

West Georgia, Vt., March 3, 1870.

TOP DRESSING LOW LANDS.

I top dress low lands by carting dirt into the hog pen under the barn in summer, and draw it on to the land in the winter, on snow. For this purpose I fix boards on the sled beams, between the caps, and some on the sides with cleats on the ends to put the head and tail boards in. I spread it from the sled. I find this much better than to draw it on when the ground is thawed.

LOADING LOGS ON SLEDS.

To load logs on the sled, I put bolt rings in the fore and hind beams of the sled, horizontally; the rings inside the caps, and hang down before the fore beam and behind the hind beam. Then on these beams pin bunks. Then I take and lay skids before and behind the bunks on the sled, hook chains in the rings, draw them over the ends of the skids, bring them together near the logs to be rolled on. To roll on the top logs, put the chains round the logs on the sled, hitch them tight in the rings, lay the skids on the logs and hitch chains into the chains that are round the logs on the sled, and roll on with the oxen as at first. This I find much better than a single chain.

Groveland, Mass., Feb. 22, 1870. E. ROLLINS.

BLOODY MILK CURED BY COPPERAS.

I had a cow which gave bloody milk every season for three or four years and could find no remedy that did any good until some one told me to give her a tablespoonful of copperas at a mess for three days in succession. I gave it, and she never has been troubled since. Her udder was so swollen that it was almost impossible to get near her to handle it, but in one week it was entirely well. D. T. CLOUGH.

Thetford, Vt., Feb. 22, 1870.

REMARKS.—We should consider an ordinary tablespoonful of copperas a large dose to be given at once to a cow, but it seems to have operated well in this case.

BUTTER FROM ONE COW.

There is a Jersey cow in Wenham, Mass., owned by a widow lady, seventy-four years old, who takes all the care of the cow and her milk. This cow dropped her calf in February, 1869, and is to come in again in April, 1870. Besides furnishing the family with milk, 360 pounds of first rate butter have been made, up to this time, and now five pounds a week are made from the milk of this cow. Five quarts of her milk have made a pound of butter. She is fed two quarts of meal a day, with dry hay. L.

Topsfield, Mass., March 7, 1870.

CORN COBS.

I am of the opinion that they are not worth the cost of grinding, which is five or six cents per bushel. I have never tried any experiments myself, but have in my mind a farmer who having some doubts in regard to the use of cobs for stock, got five or six bushels of clean cobs ground and fed to his horse. He found that his horse would not eat the cob meal till he mixed one or two bushels of corn meal with the five or six bushels that his cobs made. L. T.

Concord, Mass., March 9, 1870.

PIG RAISING.

In May, 1868, I bought a sow pig for $5. She was half blood White Chester County and half Mackay. April 15, 1869, she had a litter of pigs; raised six; sold four of them, when four weeks old, for $26; kept two to fatten, the dressed weight of which at seven months old, was 516 pounds, and sold for 15 cents per pound—$77.40. Sept 14, she had a second litter, raised twelve; sold nine for $49.00, and kept three, now worth $50. Commenced to fatten the sow December 1, dressed weight February 5, 1870, 506 pounds. Sold at 15 cents, amounting to $75.90—making the total amount of income $278.30. C. E. W.

Bellows Falls, Vt., March 5, 1870.

CHOKED CATTLE.

A year ago last fall, while driving a drove of cattle to Brighton, a heifer got choked with an apple, and was so far gone that she could hardly stand. I got a pint of soft soap at a house near by, which was rather thick, and I added a little water, and poured it down her throat. In five minutes she was well. I have never known this to fail of removing the obstruction either up or down in short time. WILLIAM W. CROSS.

Bridgton, Me., Feb. 28, 1870.

INFALLIBLE CURE FOR LICE.

Having read a great many remedies for the prevention and cure of lice on cattle, I wish to suggest for the benefit of the readers of the FARMER a receipt that is safe and infallible. In the first place before your stock comes to the barn for the winter, see to it that they are fat; then during the winter months take a little pains from day to day to keep the tallow gradually increasing around their kidneys, and you never will be troubled with lice. I am a young *farmer* and inexperienced in

many things, but I am *thankful* that I have found out that the above treatment is entirely efficacious, and that, though not patented, it will "knock" all internal and external concoctions higher than a "kite." HEBARD, SECOND.

Randolph, Vt., Feb. 14, 1870.

SCOURS IN COWS.

I once had a valuable cow that was troubled with scours, and I expected to lose her, till using this remedy she was saved:—One quart of wheat flour, tied tight in a cloth, put into a kettle of boiling water, and boiled three hours. After it was taken out and cooled, it was pounded fine, and given her to eat dry. By twice feeding with this she was cured, and never troubled with it again. It is said to have been equally effectual in cases of dysentery with persons. J. B. S.

Haverhill, Mass., Feb. 28, 1870.

RAISING TURKEYS.

Will some reader of the FARMER who has been successful in raising turkeys, give his manner of treatment while small. What should be fed to them, &c. I. D.

Enfield, N. H., March 1, 1870.

REMARKS.—In the Monthly FARMER for 1867, page 289, is an excellent article on this subject, by H. A. Sumner, of Brandon, Vt. Probably that article alone would be worth the cost of the whole volume to you. We shall be glad to publish another as good.

CORN STALK FODDER.

I must dissent *in toto* from the statement of Dr. Loring, that "Green corn stalks are the poorest and meanest fodder that was ever given to cattle." Both experience and observation have taught me that when the stalks are *properly grown* and *judiciously fed* to stock of all kinds, they are very valuable fodder. Such, also, is the opinion of my neighbors, several of whom are subscribers to your paper, which by myself and family is valued so highly that we would go without our dinners, were it necessary to do so, to raise the money to pay for it, as we find in every number something that interests, instructs and amuses us.

HENRY E. HITCHCOCK.

Sturbridge, Mass., Feb. 7, 1870.

LICE ON POULTRY.

For the last five or six years I have been very successful in destroying lice in my hen coops, by giving the coop or house a thorough whitewashing in the spring, first adding about a gill of kerosene oil to a gallon of whitewash, and about once a month sprinkle the oil about on the roosts, in the laying boxes, &c. Since I commenced the operation I have seen no vermin. J. BUFFINGTON.

Salem, Mass., Feb. 21, 1870.

THE HAY CROP A SPECIALTY.

At a recent meeting of the western division of the North Kennebec Farmers' Club, as reported in the Waterville, Me., *Mail*, Mr. Hall C. Burleigh, one of the leading farmers of the Kennebec valley and President of the North Kennebec Agricultural Society, remarked that he believed the best course for our farmers to pursue was to raise hay as a leading crop, and consume it upon the farm. The *Mail* in reporting him says:—

Mr. Burleigh boldly proclaims that the true policy of the Maine farmer, great and small, is to make the hay crop a specialty, and feed it all on his own territory, keeping up the fertility of his field, not by ploughing often and seeding afresh, but by top-dressing. Of course his plan does not forbid the raising of a small crop of potatoes, or corn, or barley, or oats, &c., for his own use; and he would especially enjoin upon the farmer to have a good garden, and as large an orchard as he can keep in thrifty condition. And this would be his plan whether a man is to market butter and cheese, or beef, or wool.

He does not approve of the popular method of applying manure, with a rotation of crops; for by the time you get round to grass three-fourths of your dressing has been expended and you get about one-half or three-fourths of a ton of hay per acre, and this at first coarse and of a comparatively poor quality. Composts his manure in open air and applies it as top dressing, well rotted, in the fall; and in this way brings up the capacity of land from one-half a ton per acre, to all the grass you can conveniently make on the space. Applies ten or twelve loads per acre, and applies all he makes to his land. This method saves the expense of plowing and seeding; the work is done in the fall, when the farmer is not driven as in the spring; the quality of the grass is much improved, for it gets finer and better yearly; and in this way the grass roots are not only fertilized, but the manure acting as a mulch, they are protected from frost and drought. He thinks that manure applied in this way is more lasting in its effect, though of course different soils would vary in this. Never would plough grass land for the purpose of fertilizing the soil; does not believe that well composted manure loses much of its virtue by the escape of gasses into the atmosphere, and stated that there had been a great revolution of opinion on this point among experienced farmers and scientific agriculturists. He thinks that at the present prices of labor and products, corn and potatoes can only be raised at a loss in Maine; that hay has been $15 a ton at some time in every year for ten years past, and that it is worth that or more to feed out upon the farm. He is very well satisfied thus far with his experiments in top dressing.

AN OLD BATCH OF BREAD.—A batch of bread consisting of eighty-one loaves, that was put into an oven at Pompeii nearly eighteen hundred years ago, has just been taken out, and is found to be *somewhat overdone*, which is certainly not surprising. These loaves, which were found in the course of recent excavations, are about nine inches in diameter, rather flat, and divided by eight lines radiating from the centre, into segments.

PREPARING SOIL FOR A GRASS CROP.

IN making up a hurried report of the discussions at the late meeting of the *Maine State Board of Agriculture*, at Lewiston, we were compelled to omit a portion of the many excellent opinions stated and facts given. The discussion on the *grass crop*, on the last day of the session, was long and earnest, as that is one of the leading crops of the State. Mr. Secretary GOODALE desired to hear more about the preparation of land for grass. The ordinary way involves a great amount of labor in planting to corn or other crops, and afterward sowing to grain and seeding down; he wished to know if there is a way to seed down directly, using the sod for enriching, as well as other manures?

Plaster and ashes are beneficial on many lands; on others, they are of little use. A crop of clover will leave the land in richer condition for grass. Clover hay is an excellent manurial crop, but if the liquid portion of the manure is not preserved a great part of its value is lost. Clover is not grass, though classed with it by farmers. It has the power of extracting from the ground and air many elements that grasses are not able to obtain though they need them, and thus using clover as a manure has an excellent effect upon the grass crop.

Clover ploughed in green, as a manure, has been successful in some instances; in others, when turned under in a green condition in hot weather it has been injurious to the land. Therefore it is best to plough clover in after it has somewhat ripened.

Dr. GARCELON, of Lewiston, is in full practice of his profession, but found opportunity to attend three or four sessions of the Convention, and took an active part in them. Born and brought up on a farm, and having had the care of one during all his manhood, his early partiality for it had found no abatement in the pursuit of his profession as a physician. On the contrary, he turned to the farm with renewed zeal and pleasure as the passing years went over him.

He had made many experiments in reclaiming lands from the forest, from swamps and and barren sands, and believed that the most obstinate of them all could be profitably brought into a state of high fertility. He took a "run out" farm, but one that had sufficient vitality left to grow young pines and birches. These were cut off, and the stumps extracted. The farm was of a clay soil, as is most of the land in Lewiston.

After the land was cleared of the rubbish, it was ploughed, and liberally manured with twenty ox-cart loads of manure to the acre, which was spread broadcast, and worked in with Share's harrow. Then spread 100 bushels *leached* ashes per acre, and harrowed with Nishwitz's harrow. After this preparation, the land was planted with potatoes, and produced a crop answering admirably to the work which had been done upon the land, and the liberal dressing it had received.

After the potatoes were taken off, ploughed again; manured broadcast in the spring, ploughed again and sowed with barley, two bushels of seed to the acre, and twelve pounds of clover seed and one peck of herdsgrass. The crop of barley was fifty-four bushels per acre. The next year the first crop of grass cut was on the first of July, and gave two tons per acre; the second cutting was in the middle of August, and gave one and a half tons per acre. His lands were generally treated in this way, and the results, he said, were satisfactory. The object was to make a grass, or milk farm. By this thorough working, the fields were smooth enough to use any machine upon when the first crop of grass was ready to be cut. He admitted the importance of stable manure, but was of opinion that the farmers of Lewiston could do better than to pay $4 or $5 a cord for it, and haul it, as some do, six miles. A cheaper and better course is by the use of ashes, salt, leaves, muck, plaster, and the use of clover. We spend $40 or $50 for stable manure, when we can fertilize the soil more by turning under clover, and filling it with vegetable matter. He was satisfied that clover is one of our cheapest and best manures.

Dr. Garcelon stated that, under the treatment above described, he had a field of clover which was so heavy that it became suddenly lodged, and required the time of a good mower for several days to cut a single acre.

The Dr. said his land was rocky. Had fifty

to seventy-five acres of mowing land; his father had used tons of plaster upon the farm, and plaster, lime and leached ashes are still used; has a drain *three-fourths* of a mile long, which cost $1000.

NEW MILCH COWS.

The spring is the time when a large portion of cows drop their calves, and the time, therefore, when especial attention should be paid to them. Even when kept with excellent care through the winter, when the time near parturition arrives, difficulties will occasionally arise that require both care and skill. Sometimes the udder becomes greatly enlarged by a superabundance of milk, which, if not taken away, is quite likely to break and destroy it, and greatly distress the cow. The popular belief is, that no milk should be taken away in such cases. But it is an erroneous one. At any rate, the danger must be less than that of a broken udder.

If the udder is hard and no milk can be drawn from it, it should be bathed in warm water, warm soapsuds, together with a great deal of gentle friction by the hand. If the milking, bathing and friction do not succeed, rub the udder with a liniment made of sweet oil and ammonia, or simple lard or fresh butter. In such cases, the condition of the bowels must be regarded, and Epsom salts given as a laxative. All cows should have *entire liberty* for a week or two previous to calving, such as an open dry shed, or a pen twelve feet square in the barn. After dropping the calf, the cow should have a drink of shorts and warm water, once each day, for two or three days, in addition to her usual food.

MAINE COLLEGE OF AGRICULTURE

In consequence of the refusal of the town of Orono, Maine, to execute such a deed of the land given to the State for a college farm as was required by the Legislature, an appropriation of $40,000 for the college made at its last session was withheld.

At a town meeting in Orono, Maine, on the 21st ult., it was voted, with only one dissenting voice, that the town will give to the State College of Agriculture and Mechanic Arts an absolute conveyance of the premises heretofore conveyed, subject to these conditions: That in case the location of said College shall be changed from Orono, or be abandoned, or cease to be used for the purposes contemplated by the act establishing said College, then the State refund to the inhabitants of Orono the sum originally paid for the lands, viz: eleven thousand dollars with interest from the date of said purchase; provided, as a condition precedent, that the State shall first appropriate and there shall be expended upon new buildings, buildings now in course of construction, the grounds, and otherwise, substantially as asked for in the last report of the Trustees, the sum of fifty thousand dollars.

THE ENGLISH SPARROW AND CURCULIOS.—In reply to the opinion of a correspondent of the *Prairie Farmer* that these birds will destroy curculios, the horticultural editor states that he has examined the craws of many insect-eating birds, but never found any trace of a curculio therein, and does not believe that the sparrow or any other bird can catch the curculio. We once put a coop of chickens under a tree badly infested with curculios, and repeatedly jarred them on to the ground among the chickens, but were entirely unable to see a chick pick up or even notice a curculio, though we saw them fall just before the hungry chicks. Nor could we perceive that the number of curculios were at all reduced by the frequent jarrings which was given to the tree, or by the presence of the chickens under it.

ORCHARDS IN EXPOSED SITUATIONS.—From experience with an orchard set on an exposed prairie ridge, several miles from timber in all directions, a Missouri correspondent of the *Prairie Farmer* believes that such situation is better than a protected or sheltered one, because, 1. Not so liable to injury from sudden change to cold in the fall of the year. 2. Are not so likely to be damaged by alternate warm and cold weather in winter. 3. Put forth their blossoms later in spring and consequently are more certain to bear fruit. The locality in which the sap rises latest in spring is best for the safety of the tree, and for the production of fruit.

For the New England Farmer.

WINDOW GARDENING.---No. 5.

FOR MARCH.

Though March is the first of the Spring months, in New England, her foot prints are usually in snow and ice. The winter has been so remarkably mild that we may feel the force of the old proverb, "*As the days lengthen the cold strengthens,*" ere April greets us with her smiles and showers.

Our flowers show the effects of sunny skies and mild winds. Gay and bright are our windows now! The Fuschias are coming rapidly into bloom, and among all our household plants they rank supreme! The light and graceful habit of the plant renders it desirable in every "Window Garden," but when adorned with its pendant flowers of richest crimson and purple dyes, or an ex-

quisite rose shaded to crimson with its purely white corolla, it seems to us one of the most elegant and tasteful of all the flowers of the earth. The Fuschia possesses other qualities which increase its value—it grows with but little care—will strike root in water or sand with great facility. A child can raise a plant as easily as a gardener, and some kinds can be kept in bloom eight months out of the twelve. It blossoms in the summer—but careful culture will force its flowers in the winter. As we write, a lovely plant of the *Speciosa* stands before us covered with its pale waxy pink flowers, with crimson corolla, hanging like jeweled tassels from its numerous branches. The Fuschia is a native of South America. In Brazil it grows in tangled thickets, and the renowned naturalist Darwin in his "Voyage Around the World" speaks of breaking through its thick branches as he roamed in the woods of that country. The varieties we now cultivate have been successfully hybridized by the careful Florists of America, England and France. Specimens with a double corolla have been produced. *Elm City*, *Queen of Whites*, *Giant*, *Grand Duke* and *Emperor of the Fuschias* are the most desirable of these varieties.

It is nearly seventy-five years since these lovely plants were first brought into notice. Mr. Lee, a well known florist at Greenwich, near London, first cultivated them. A customer purchasing plants of him said: "I saw in a window at Wapping a prettier flower than any you can show. The flowers hung like tassels from the drooping branches, their color was the richest crimson, and in the centre were folded leaves of a Tyrian purple hue." Mr. Lee enquired the exact locality, where this rare "novelty" was seen, and hastened to behold it. At a glance he knew its worth. Entering the house, he told its mistress that he should like to purchase her window-pet. It was the gift of a sailor husband—who was then across the seas—and she could not part with it. Mr. Lee must have it—he emptied his pockets of gold, silver and coppers—amounting in all to more than eight guineas, saying:—"All this money is yours, the plant mine. I'll give you one of the first of the cuttings I raise, and when your husband returns, the plant will be quite as handsome as this one."

She gave a reluctant consent—the money had a potent force. Mr. Lee hastened away with his treasure. He cut it into "joints"—the smallest sprout quickly took root, they were forced in hot-beds. Every effort was employed to increase the stock, and in a few weeks three hundred plants were growing finely! Soon the blossoms were seen, and when the first two had expanded, the pot was exhibited in his window. A noble lady was his first visitor, she was charmed with the rare flower, and demanded its price. One guinea was asked and received. That night the Duchess entertained her friends, and the beautiful flower was much admired. Eager voices enquired whence it came, and the following day many visited Mr. Lee at Greenwich, but only two plants were in bloom. Others were engaged, and before the summer closed three hundred guineas were raised from the original eight! The variety then propagated is rarely grown now; its leaves and flowers are so insignificant when seen by their cultivated sisters, but it is still a favorite with us, for its fragile flowers press beautifully, and are great acquisitions in a pressed boquet or wreath. Ten species of Fuschias are numbered in our "Window Garden," and all flourish well. They bear stimulating—can be watered with guano water twice a week, without frown or fraction. *Geraniums*, *Heliotropes*, *Fuschias*, and *variegated leaved plants* will bear strong tonics—*require them, to flourish well.* Twice a week, they can now be thoroughly wet with warm guano water, one tablespoonful to one gallon of water; but *Verbenas* and *Roses* must be watered more sparingly. Their tender, fibrous roots will scorch more easily; if the manure water is too often applied, the rose leaves will grow yellow, curl, and drop, and the plant may wither away. We once killed twelve fine monthly roses in this way, hence this caution. Roses will be coming into full bud now, and care must be taken to give them water enough, yet not to drown them. Red spiders and *aphides* are their great enemies, and if they cannot be showered frequently they must be sponged. A dozen sulphur matches soaked in a teacup of warm water, or a bit of brimstone as large as a marrow-fat pea, dissolved in warm water and applied with a sponge to the leaves and branches, is often an antidote to their attacks. They do not like the smell of brimstone and it will kill them. In these proportions it will not injure the plants, but if used in larger quantities it will cause their leaves to fall.

At this season, all the plants in the cellar should be brought up, and the dead leaves and branches pruned off. The earth must be well stirred up with a hair-pin, and it is well after the soil is thoroughly wet to run a knife around the edge of the pot, and turn out the ball of earth. If there are any worms, they come to the surface, and can be easily removed. Angle-worms are not conducive to the growth of plants. Roses will soon put forth leaves and buds, and become a thing of joy and beauty. It is a rare treat to visit greenhouses in this month—they are in a blaze of glory, and fully repay the visitor. Such rare coloring—such beauty of form is there exhibited, that the soul of a true lover of flowers bows down in adoration before them! They are more beautiful than a picture gallery, for the Divine pencil hath painted their hues—designed their graceful forms, and clothed them in the beauty of Heaven.

> "There is a lesson in each flower,
> A story in each stream and bower;
> In ev'ry herb on which we tread
> Are written words which, rightly read,
> Will lead us from earth's fragrant sod,
> To hope and holiness in God."

March in her mildest mood often presents us with clusters of snowdrops—those heralds of the spring which hang their tiny bells amid the snow-

flakes, undaunted by the cold March winds! How joyfully we greet them—mute harbingers of joys to come! How beautiful are the small sisterhoods of these peerless flowers! In England they are called *"Maids of February"* as they are often found in that month blooming in some sheltered dell. They are numbered among the wild flowers of that island, while we cultivate them as lawn plants, or in beds. Soon they will be followed by the gorgeous tulips, the sunny daffodils, the fragrant hyacinths, and all the various tribes of early spring flowers. All lovely and to be loved.

During this month we must not remit the attention paid to our "Window Gardens," we must water, wash, stimulate and stir up the soil with hair-pins, which are always handy. Those plants which are not budded may be forced into bloom if they receive proper care and culture. There is not a window plant which may not be filled with clusters of flowers if the gardener cultivates it *rightly*. We need have no barren plants—each must add its quota to the glorious beauty of the whole. But a few weeks more, and we shall turn our attention to summer gardening, to raising annuals and perennials, cuttings from *"Bedding out Plants,"* and all the various duties therein contained.

S. O. J.

For the New England Farmer.

SINGULAR CATTLE DISEASE.

In a communication to the Weekly FARMER, June 20, 1868, (Monthly, of same year, page 361,) I gave a statement respecting a disease that prevailed among cattle in the region bordering on Buzzard's Bay and contiguous to it.

Recently I have learned that a much larger area of southeastern Massachusetts, one town in Rhode Island and one in Connecticut, are afflicted with the same calamity. As this article may meet the eye of some who either did not see the statement then given or have forgotten it I will restate some of the facts then referred to and add some others.

The first manifest trouble is loss of appetite for both food and drink, especially for the latter. The best of food gradually fails to tempt the appetite, and all water whether from the pond, brook, well or cistern, is alike unsatisfactory and almost unused. During all their decline the eye appears healthy, the nose moist and the horns warm. The hide is close, and the hair stiff to the touch as with *all poor animals*, but in no respect worse. What appears quite incomprehensible is the fact that stock receiving the best of care are more seriously troubled than those that are comparatively neglected.

On the farm of J. S. Fay, at Wood's Hole, the stock has had the very best of stabling and care the year through, and yet his cattle apparently suffer more than those of some of his neighbors that are not so well stabled and fed. This may be accounted for in part by the fact that he has more or less blood stock in his herd, and not as much of the native as most of his neghbors. The *native* cattle appear to get on with less trouble than other stock. The Alderney seem to suffer most. Quite often a farmer that is exempt is surrounded by others with whom it prevails.

James L. Brown of Mattapoisett is situated in this manner. He told me that it was a common thing for him to take stock from his neighbors that were mere skeletons when taken, which would soon recover their health and condition. He has quite a large estate and deals in farm stock extensively.

A resident of Falmouth, named Cahoune, I am informed, has a place that is exempt, though environed by the disease. This man purchases the diseased stock when so reduced as to be scarcely alive, for a small price, getting it home as best he can, often using a team to move it. In a few weeks he has the cattle apparently well and ready for sale.

How to account satisfactorily for this state of things is beyond the wisdom of all who have given the disease an investigation. In a foot note to my previous writing on this subject, you conveyed the idea that the trouble grew out of a want of judgment and care in feeding, &c. So far as Mr. Fay's stock is concerned, this cannot be true. The pasturage is excellent, with plenty of good water, the hay is of the best quality of cultivated varieties, and there is no lack of corn, meal, shorts, and roots. The stables are ventilated, with large side windows which admit plenty of air and light at all times, when necessary.

The only known palliative so far as I have been able to learn is found in the use of copperas. The benefit derived from its use is only temporary. It soon fails to quicken the appetite in any appreciable measure. The only sure cure known is removal from the infected district, which I am now informed embraces all the towns on Cape Cod, with Marrion, Mattapoisett, Fairhaven, Dartmouth, Westport, and to some extent, Little Compton, R. I., which borders on Westport. A writer in some agricultural paper, I have recently seen, describes the same disease as prevailing among his cattle in Connecticut.

It seems surprising that a calamity so wide spread should have so long failed to attract attention. The reason for the apparent apathy is probably found in the fact that none of the affected cattle are kept in the infected districts until they die, as it is well known that by changing their locality they are restored to health again. All expectation of profit from stock kept under such disadvantages is hopeless. Milch cows dry up in a great measure, and their milk is of necessity poor in quality.

I saw Mr. Fay's stock two weeks since, and found nearly all of them suffering more or less. I assisted in giving copperas to eight of his

cows. In two or three days after taking the medicine they manifested a greater desire for food and water. I wrote to him in Boston, suggesting that it might be well for him to see Mr. Flint, the Secretary of the Board of Agriculture, and ascertain if he could give him some clue to the cause of the trouble and the remedy for it, or refer him to some one who could do so. Mr. Flint could give no information, but gave some references to parties he thought it would be well to consult. From the suggestion of the person in charge of his place, Mr. Fay has decided to defer having a veterinarian examine his stock until some one of them is so reduced by the disease as to preclude all hope of its recovery, then kill it and have an investigation, and if possible ascertain the seat of the trouble if its organs will disclose it.

I will also state that calves until a week or two old have an appetite for their food; after which it begins to fail, the hair in some instances comes off, and they eventually die. Mr. Fay lost some last spring, and gave away some. One was taken away by Mr. LeBaron to Mattapoisett. It was unable to travel much; would tumble down and required help to get up. He put it on one of his cows, and in the autumn it took a first class prize at the Plymouth County Fair.

Other like facts might be adduced, but the foregoing, it would seem, ought to arrest the attention of those who by reason of their position can influence the public mind; also of those familiar with the disease of animals.

March 7, 1870. K. O.

For the New England Farmer.

SPRING WORK.

Our almanacs tell us spring has come, but in this latitude, seed-time, the up-shooting blade, the opening bud and flower, and the rapid springing into active life of the whole vegetable kingdom are still far in the future. Although wintry winds and frosts prevail for fully one-half of the season, the lengthening days and increasing warmth of the sun's rays remind us that the busy time for farmers has again arrived. A day's work of ten houre can now be made, and teams and men are actively employed in preparing for planting, or in pushing forward permanent improvements.

A thoughtful and careful preparation for planting is of vital importance in a climate like New England, where the season for growing a crop is so short. The farmer who is thoroughly prepared for all his planting at the right time of putting the seed into the ground can do it quickly and well; and if ready to grapple with the weeds he can make easy work of the after cultivation. When planting is begun without due preparation it is generally hastily and imperfectly done, and tedious and expensive cultivation is the usual result; indeed it is almost impossible to make up by any after care for the neglect and deficiencies in planting.

Those who believe in being thoroughly prepared have a system in doing their work; they determine long beforehand what crops they will plant, and the amount of land they will give to each. They examine carefully their stock of seeds, and buy early such as they need. They believe in owning all the tools they use upon the farm, and in keeping them in perfect order; they cannot afford to borrow, even if their neighbors are willing to lend, for the time spent in going after and returning a borrowed implement, in busy seasons, is generally worth more than the interest upon the cost of the implement itself. Keeping tools in order means more with them than keeping them housed; it means keeping them clean and bright, and repairing promptly when broken, and look ahead to prevent breakages. If harnesses have weak or worn parts, they are replaced by new; if chains have links which show indications of breaking, they are cut out and new ones put in. They always have on hand extra points for ploughs and teeth for cultivators and harrows, for they know if these break when work presses, the delay and time lost in sending for others is much greater than the cost of new. They have duplicates of those parts of the mower and reaper which are most liable to give out. A breakage of either, which requires sending to the agent or manufacturer, may occasion a delay a delay of one or two days for repair, the effects of which will in some seasons amount to many dollars. They do not think of commencing the busy season with old and rickety carts and wagons, for they are well aware that money is lost every hour that men and teams are working with poor tools. They are so well prepared that vexatious delays and losses from the want of any implement seldom occur.

Early spring is the time for preparing everything for a vigorous campaign. Every day something may be done to facilitate business. Commencing early is one secret of success, and those who do it are the ones who keep up with their work and drive it rather than being driven by it. Besides preparing for planting, fences may be repaired, the old walls laid up, new lines built, bushes beside walls cleared up, rocks dug, stones picked up, new land ploughed, something done at ditching and draining, and in short permanent improvements of all kinds can be pushed forward. Repairs on the roads can be done at this season better than later; gravel can be moved easier, and if the work is done early the public is benefited thereby. August is generally considered a good time for making permanent improvements, but after the exhausting labors of the hay and grain harvest, heavy work drags slowly and tediously along under the sweltering and enervating atmosphere of this month; moreover at that season, there is much to be done

in the orchards, and among the growing crops and in preparation for fall seeding and for early harvest. Cool weather is the more fitting time for heavy exhausting work; teams are strong, the men vigorous and come to their tasks with a will. As much can be accomplished now at some kinds of labor in eight hours as during ten in August. Hoeing follows planting, haying follows hoeing and the grain and fall harvest follows haying so closely that there is little opportunity for doing more than attending strictly to the growing crops.

The complaint is often made here that the winters are too long, and the season for growing crops too short, and that those States where ploughing can be begun in February or March are more desirable locations, but one difference between farming in New England and further South is simply a change in the order of work. We raise as large a variety of crops, and we take one crop during the year from the land, they do no more; but here many things must be done before seed-time and after harvest, which are done there during planting and while crops are growing. Both may begin the work about the same time. Spring time is invaluable to those who have a fair proportion of their farms in tillage. Either under cover or in the fields there is work enough to be done. N. S. T.

Lawrence, Mass., March 1, 1870.

For the New England Farmer.

BROAD INSTEAD OF NARROW WHEELS.

During the past open winter our highways have been badly cut into deep ruts, and it will cost a good deal of money to repair them in the spring. How much of this expense is justly chargeable to the use of narrow wheels? I was long ago satisfied that it costs twice as much to keep our roads in repair with narrow wheels as it would were ordinary wagon wheels not less than four inches wide, and heavily loaded wagons six inches. When I was eleven years old I drove an ox team from Reading to Salem, generally loaded with wood. This was my general employment for some years. I am now eighty-one years old, and consequently have had seventy years experience on highways; perhaps as much as any man in the State.

In the month of April, 1835, I made an agreement with Patrick T. Jackson to move Pemberton hill in Boston. The work was to commence on the 5th day of May, and to be completed in six months from that day. In order to do this I found it needed one hundred and twenty-six working oxen. These I could buy in a very short time; but carts enough I could not get made to commence this business with at the time. This put me under the necessity of buying or hiring of every farmer that would sell or let a cart, until I could get new ones built.

In a very short time after commencing the work, all my teamsters who used the narrow wheeled carts, complained that they run harder than the wide wheeled ones did. I was not a little surprised at this, as it had never entered my mind that it made any difference, on hard pavements, whether the wheel was narrow or wide in drawing a load. But I was determined to know the real cause why it was so. For this purpose I walked beside a cart with narrow wheels several times, watching the movement of the wheels. I found that it was seldom that the wheel would run right straight over a paving stone, but would generally hit on one side or the other and slide off into the hollow. By these slides the load went down without helping the team any, which had to lift it out. As near as I could calculate the team had to draw the load up hill six inches to every rod they went ahead. I then walked alongside the cart with the wide wheels, watching them in the same way. I found that when the wide tire hit on the top of the stone it would roll off and not slide either way, and when the centre of the wheel came between two paving stones, the wide tire would strike both and pass over without sliding. Satisfied of the superiority of wide rims even on pavements, I got rid of all the narrow wheels on the work as soon as I could consistently.

Now Mr. Editor I think if no wheels were allowed to go on our highways less than four inches wide, and all those carrying heavy loads, six inches wide, that it would make a saving in Massachusetts of one-half of all the expense of repairing our highways.

The question may be asked by some, if wide wheels are best, why have the people not found it out before now? I will answer this question by saying I once knew a man of very close calculations, but a very selfish man, who was about getting up a very nice wagon to team wood on. He went to Dea. John Symmes to do the wood work, and to his brother, Marshall Symmes to do the iron work (allow me here to say that two better men never built a wagon.) This man took particular pains to find out how wide the tires were that run on roads with heavy loads. He found them generally from two to two and a quarter inches wide. He then said that he would have his only one and three-quarters inches. On being asked the reason for having such narrow wheels, he said he did not want his wheels to bind in the frozen ruts. Such being the reason for using narrow wheels which cut up our highways, and add largely to the expense of keeping them in repair, we can never expect to bring about the use of broad wheels without some act of the Legislature. I hope our present General Court will take the subject into consideration, and adopt such measures as in their wisdom may appear just and equitable, both to those who use and those who repair our highways.

I have said nothing at all about the broad wheels running the easiest on sandy or loamy

ground, for every man of common sense knows this to be the case. A. G. SHELDON.

Wilmington, Mass., March 7, 1870.

HORSE STABLES.

Mangers are better than racks for feeding any animals, and we are glad to know that the old and injurious plan of compelling animals to haul their feed down from racks—which is contrary to all laws of nature and reason—is being rapidly done away with.

The manger in a horse stable should be situated at a convenient height for the horse to eat comfortably. We are opposed to the plan adopted by many of leaving a space between the manger and floor for putting bedding, for the reason that the strongly scented ammoniacal gas which arises from straw soaked with urine, is unhealthy for the horse to inhale; and further, being directly beneath the feeding manger, the hay will be more or less injured by it. Another objection is, the bedding, when packed in that manner has no chance to dry.

The litter of the different stalls should be removed and spread upon the barn floor, or out of doors, if the weather will admit of it; but if there is no chance to do either of these, we should prefer to shake it up thoroughly and place it along the side of the stalls as far back as possible, so that it may have *some* chance to dry out.

After the bedding has been removed, and floor made clean, some absorbent should be put on, such as spent tan-bark, chaff or sawdust; never use lime or ashes, as they will be likely to injure the hair of the animal. Fresh, dry earth is one of the best material to use for purifying and drying up stable floors.

The stable should be so arranged, with regard to light, that a person on coming from without would experience no difficulty in observing objects within. It is not best to have a bright beam of light let in immediately upon the horse's eyes; but it should be a diffused and subdued light.

Ventilation should always have particular attention, and the conveniences for this purpose so arranged that a current of air coming directly upon the horse may at any time be shut off. A horse, coming heated from the road, put into a stall with the chilling wintry winds blowing in a strong current upon him, is very much in danger of taking cold and being stiffened up.—*Ohio Farmer.*

ELDER OINTMENT.—Take the inside bark of sweet elder, boil to a strong infusion; strain it, then add equal parts of beeswax and mutton tallow; say to one-half pint of the liquid a piece of mutton tallow and beeswax each the size of a hen's egg; simmer until the water is out. If a softer ointment is desired, use fresh butter instead of mutton tallow. Here you have a recipe for an ointment which is invaluable as a healing remedy for erysipelas, sores, cuts, chilblains, and sores of all kinds, and especially excellent for burns.—*Rural New Yorker.*

COUNTRY AND CITY SORROWS.

The following lines were written for the *Western Rural* by "Aunt Hetty," in reply to an article on the privations of a "Farmer's Girl":—

Read a little louder, Margrett, I would hear each spoken word;
For the subject of thy reading every pulse has rudely stirred;
I was once a farmer's daughter, and my path has longer been
With the tiller of the soil, than with the wielder of the pen.
I have seen the snows of seventy, whit'ning over hill and lea,
Seventy years has budding Spring-time shed its fragrance over me;
I would say, and say it boldly, all the sorrows farmers bear,
All the woes of plain and hill-side, with the city's can't compare.

Margrett, write the words I've spoken, for my hand is palsied now,
And the lines of time and grief are written deeply on my brow—
Lines that had not found a resting if I had but sooner learned
Life was not an idle pastime—not a birthright to be spurned.
I have wandered from the homestead, Margrett, thee may learn by this,—
Learn from one who fain would lead thee in the surest way to bliss,—
That 'tis not within a palace—not in lofty classic hall—
But where peace and love united follow after duty's call.

Truly, thee will find much sorrow in a shiftless farmer's cot;
Scant, indeed, will be the harvest of the good mate's hapless lot;
But reverse the order, Margrett; in the city thee can see
Man with all his gifted nature prone to sin and misery;
Not alone the rough, wild country shows deformity within,
But the gilded halls of plenty breed both suffering and sin;
Not alone the farmer's helpmeet sighs for rest and classic lore;
City wives have craved such blessings, but their spirit's freedom more.

Thee would weary of my story if I should the truth relate
Of the wives of truant husbands, who their tardy coming wait
From the dens of vicious pleasures, where they wreck each hope at birth—
Hopes they might have loved to cherish of a true and moral worth.

Think thee, Margrett, thee could gladden at the slow unsteady pace,
Could thee lay thy hand in blessing on the senseless bloated face?
Or, with kisses fond and tender, press corrupted lips that curse?
Answer me this question, Margrett, can a farmer's wife find worse?
Can it be thy mind is puzzled? is the problem, then, too deep?
Wouldst thou leave earth's rugged pathway, and a flowery border keep?
It were well, but act thou wisely; choose the man and not the trade,
Or believe me, Margrett Merville, thee had better die a maid.

HOT-BEDS FOR FARMERS' GARDENS.

MARKET gardeners, commercial florists and amateurs understand well the absolute necessity of hot-beds in the economy of their operations. But few farmers are willing to incur the expense which they *imagine* is necessary for their construction, or to afford the time required for their management.

Various plans have been suggested for the construction of a cheap and simple hot-bed, almost any of which will answer sufficiently well for a garden large enough to supply a common family with all the vegetables needed.

Every farmer may have at trifling cost a few square feet covered with glass, to bring forward at least some lettuce, tomatoes, cabbages, early cucumbers, and a few flowers for his wife and daughters.

October is the best time, perhaps, to prepare a hot-bed, but if not done then, it may be done successfully in March, or as early as the frost will permit removing the soil.

Sashes three feet wide, by five or six feet in length are the most convenient. Three such sashes will cover a bed sufficient for most families.

A frame nine feet long, and of a width corresponding to the length of the sash, may be made of plank or inch boards. It should be eighteen inches deep at the front and two feet in the rear, and should be located on the southern side of a wall, board fence, or some building. Dig out a space as large as the frame, eighteen inches deep. Fill this with the strongest and best horse manure. Place it in even layers and tread it down as you proceed. This should be extended a distance of one foot on the outside of the frame in order to keep up a larger amount of heat. After a day or two, cover the whole, inside and out, with three or four inches of the best garden mould, mixed with a little ashes and plaster. The frame should be set about on a level with the ground, and the filling come up within eight or ten inches of the glass. Put on the glass and let it remain until the bed has become warm by fermentation. The glass should be covered at night to prevent the radiation of the heat. When the soil is in a proper state, sow the seed in rows, at suitable distances. A portion of the bed may be reserved for pots, which should be imbedded in the soil to their rims. When the seeds begin to sprout, sprinkle the surface occasionally from the watering pot, and in the middle of pleasant days, slide off the glass so as to give the plants air.

It is important to attend to this, as growing plants need a plentiful supply of fresh air. After the plants have got well above the surface, the sash should be lifted whenever the sun is shining clear and warm, lest they be scorched. Sometimes a few hours' neglect of this precaution will greatly injure or entirely ruin the tender plants. The fermenting manure will keep the soil warm at the bottom, and the sun will warm the surface, and thus the germinating seeds will find a warm soil, and a warm air, which will bring them forward two or three weeks earlier than they would come in the open air. In this way, strong and vigorous plants may be plentifully supplied, which will be fit to transplant about the time seeds are usually sown in garden beds.

When they have been transplanted, use some slight cover to protect them from the cold night air, and the wind, and if needful, from the black flies and other insects, and you will have nice tomatoes, cucumbers and cabbages that you will enjoy very much.

This may seem a small matter to many farmers, and not worth the trouble, but if tried, will be found one of those little things that contribute to the pleasure of life, and that keep us in a happy frame of mind. We shall watch the growth of the plants, green and vigorous, before anything around them shows itself above the ground, with great interest. They tell us of what is coming. They strengthen our faith in the certainty of Nature's arrangements, and encourage our hopes in the future.

There is a satisfaction in getting our early mess of peas, radishes or lettuce, that well repays all the trouble it costs. Ten or fourteen days may be gained even without use of glass, by making a bed of fine, rich soil well filled with warm compost, under the shade of a wall, and covering it at night and on cold days with boards or matting, and when the plants have been transferred to the garden, by covering

them nights with inverted boxes, screens, or even by by shingles inserted on the north side of the hills and inclined over the plants in the form of a roof.

Every farmer must be governed in this matter by circumstances, and guided by his own ingenuity. Only market gardeners, flower-dealers and amateurs, need incur much expense. But every one will find pleasure and advantage by some simple arrangement for bringing forward early vegetables and flowers.

There is no class but may do something in this direction if they possess but a few square rods of garden soil. Some of the simplest, and most successful modes, are, by sowing seeds early in any rough boxes, and placing them in the kitchen window, where they usually get the best care. Another is to start them in cheap earthen pots, broken tumblers, pitchers, &c., and another excellent way is, to roll up pieces of birch bark, fill with rich garden soil, water occasionally with weak soap suds, and set bark and plant into the ground at the proper time. A single plant, only, in a pot, will grow stocky and strong. It is a good plan, however, to transplant two or three times before setting out finally; but in doing this, the roots should not be injured in the slightest degree. Always have soil enough about them to keep them out of sight.

PLOUGHING---APPLYING MANURE.

Our correspondent whose inquiry appears in another column will thank us for copying from the *Maine Farmer* the following report of the discussion by the Corinth, Me., Farmers' Club of the subject of "shoal or deep ploughing—and best mode of applying dressing."

Hon. John Thiselle, who had been ploughing fifty years, advocated good ploughing at medium depth. For grain crops he had found it best to spread dressing on the furrow and harrow in with the grain; the dressing to be prepared the year previous. In this way he got much better grass after seeding down than from any other mode of application.—M. Chandler's universal method is to break up his grass land in July, or as soon as the grass is taken off, plough shoal and harrow down, cross plough in October, deeper, and again harrow down. Plough again in the spring, use compost dressing, in the hill for hoed crops, and top dressing for grain. By this method land may be kept entirely clear of weeds, making what is called clean cultivation.—Chauncey Cochran, one of our best farmers, spreads green dressing on grass land and ploughs shoal. He is very particular to have the ploughing well done.—John Morrison, a large farmer, adopts the same course with dressing, as Mr. Cochran, but ploughs deep (from eight to ten inches) and gets three hundred bushels of potatoes to the acre.

East Corinth. MOSES CHANDLER, *Sec'y.*

The fear of being called on to "make a speech" undoubtedly keeps many farmers who would be really glad to have a good talk with their neighbors about their business, from attending the meetings of the neighborhood club, if one already exists, or from taking an active part in getting up a club where there is none. The "spouting" of a debating school is just as much out of place in a farmers' club, as dancing pumps would be in treading down a load of manure. The Secretary of the Corinth Farmers' Club furnishes a model report of true farmer-club "eloquence." Nearly two columns of the last *Maine Farmer* are filled with similar reports of the talks at the meetings of some of the various farmers' clubs that have recently been formed in that State.

THE EASTERN SHORE DISEASE.—Since publishing the statement of our correspondent, "K. O.," in relation to the disease prevailing among the cattle at Wood's Hole and other localities, we have received a letter from him informing us that Mr. Fay has lost a valuable Alderney cow, and a neighbor of his a cow, also that a number of calves have died.

He well asks, is it not time that more attention should be given to this disease, and that our authorities should institute an investigation of the facts relating to it. Our correspondent further says that if Mr. Fay has a post-mortem examination of the animals he will forward us the results of the investigation.

Why should not the legislature at once appoint a commission to inquire into the character of this most singular disease?

MEDAL OF THE N. H. AGRICULTURAL SOCIETY. The medal designed by Mr. Herrick for this society, and which is to be struck in silver for last fall's awards, is thus described by the *Mirror and Farmer*:—"On one side, in a circle on the margin, is the name of the Society; within is Ceres, with her crown ready to fall on the result of labor, while at her feet are implements of husbandry, and the fruits of rural toil. The obverse is margined by a wreath, with the hand of the mechanic grasping the hammer, while fruits and flowers are gathered in abundance beneath."

For the New England Farmer.

RAISING CALVES.

At this season of the year the farmer looks for an increase in the number of his cattle; and what is of more importance his cows begin again to yield him a profit. The profit from the cows in butter and cheese is often considered the chief thing, and the calves are killed when four or five days old, or as soon as their stomachs have become accustomed to food and its digestion, and are in condition to be used as rennet. The skin of a calf is

worth about $1.25, and the stomach or rennet twenty-five cents.

Some farmers allow the calves new milk for from one to four weeks, and then sell them for veal at from six to ten cents per pound live weight, and the money thus obtained is sometimes enough to buy a calf in the fall six months old.

Others have not pigs enough to eat all the milk, or they want a few heifers, or have a choice breed of cattle, so they raise the calves.

I need not say that new milk as drawn from the cow by the calf is its natural food, and will cause a thrifty growth; but when calves are fed on new milk it is well to learn the calf to drink, and not allow it to suck. A calf so managed will be more easily taught to eat other food, and may do better at weaning.

But new milk is not necessary after the first few days. I have now three calves that after they were three days old were fed with milk skimmed after it had set thirty-six hours. The quality of this milk is improved by adding a pint of scalded India wheat flour. I prefer this flour to corn or oat meal. Whatever kind is used it should be scalded. First, wet the meal with warm water, then pour upon it boiling water. In this way the meal is in a liquid state instead of in chunks, as it would be if scalding water was poured upon dry meal.

Upon about eight quarts of such feed, morning and night, a calf will thrive if it is not troubled with a looseness of the bowels, called "scours." This is brought on by having the milk too cold, or too hot, or too rich with meal, or too great quantity at one feed, so as to overload the stomach of the calf. These four things must be regarded. The feed should be near the temperature of new milk, or "blood heat." I test the temperature by feeling it with the hand. It is not safe to trust a disinterested person to feed the calves. Much has been written in regard to the manipulations of milk to make butter and cheese; but as much care is necessary in raising calves as in making cheese or butter. After calves are well started I prefer that the milk should be sour, and if it is coagulated no matter. I know many instances of fine calves being so fed.

If a calf begins to scour it should be stopped as soon as possible by diminishing the quality or quantity of feed, or by adding a solution of rennet, or a decoction of hemlock or oak bark, or of the plant called "snake's-head," "hog's-tooth," or "belladonna," a very bitter plant that grows in lowlands, and has a white blossom, from the shape of which it has received its first name. Chalk put within their reach is a preventative, if eaten. Dry earth is also used.

It is a common saying among dairymen that if a calf will not do well upon skimmed milk, it is not worth raising. My experience and observation leads me to believe there is much difference in calves. Some will not do well; their digestive organs seem weak, and this weakness is, I judge, sometimes inherited. Calves from cows that are very hardy, and have been well fed, are likely to do better than from a cow with poor constitution and a straw or starvation diet.

Grade calves from a thoroughbred bull often excel the native stock in thrift. In 1868 I raised two half blood Dutch calves. They were very superior animals, and one had a calf when 22½ months old. I milk from her from fifteen to twenty pounds of milk a day. In 1869, I had two half-blood Short-horns, and one half-blood Dutch. This year I have some grades of the same kind that are doing well.

Calves should be kept separate, each in a pen or tied by itself, as they injure each other by bunting and sucking. If any one doubts it, let him stand among half a dozen calves about two months old after they have been fed. They should also be kept where there is plenty of light, and have bedding enough so as to be dry and comfortable.

Those who keep cows to sell milk, may be benefited by a word in regard to the practice of a gentleman in Springfield, Vt., a practical as well as book farmer, who sells milk and still raises calves from his thoroughbred Durham cows. He gives them milk four weeks, when their diet is changed to oil meal gruel, made by putting at the rate of one pound of oil meal to fifteen of water, and boiling half an hour, giving about this quantity to each calf twice a day. His calves do well, and as milk is six cents per quart, sixteen quarts would be ninety-six cents; oil meal at 3½ cents per pound, costs 6½ cents per day. If, however, milk was fed it probably would be skimmed milk, which would reduce the expense. I could fill this sheet with names of men who have raised good large calves upon a mixed diet of skimmed milk, hay tea, or gruel of different kinds of meal. Z. E. J.

Irasburg, Vt., March, 1870.

For the New England Farmer.

DAIRY, DUTCH CATTLE, SHEEP, &c.,

Of Thomas Baker, Barton, Vt.

Some time since I sent you a statement of the method by which the butter was made that drew the first and second premium at the fair in 1869 in Orleans County, Vt.

I recently called at Mr. Baker's to see his Dutch cattle and learned from him that 150 pounds of butter and 100 pounds of cheese were made to each cow in 1869, besides raising eight half blood Dutch calves, and fattening several for the butcher, and fattening hogs with sour milk. For twelve years Mr. Baker has sent his butter to C. Jarvis, 21 Leverett St., Boston, where it has been retailed to customers at a better price generally than has been paid by dealers for country butter.

I would like to hear from other dairymen who keep twenty-five cows or more, in regard to their average products in pounds,—the price may vary according to the style of marketing.

Since the purchase of Mr. Carlos Pierce's herd of Dutch cattle, Mr. Baker has had fifteen head of full bloods, four of which are bulls. He has also twenty half bloods, all black or black and white. These will be one and two years old this spring—they are fine thrifty animals, superior in size to the average cattle of the county. They eat coarse fodder and bear common keeping well.

Dutch cows are usually considered best for a cheese dairy, but on this farm they will be tried quite thoroughly for butter. It will be several years before all the cattle on this 700-acre farm are of this kind, and of sufficient maturity to show fully their merits.

One of his cows, Lady Bellows, has a half blood Jersey calf, and gave thirty-five pounds of milk a day in January. Lady Bellows, 2d, was tested while at Mr. Pierce's, and made fifteen pounds of butter in a week. Lady Bellows, 3d, calved November 17, 1869 and gives a fine mess of milk. These cows are all larger than the best dairy cows average. All are black and white; the white color in some forming a belt around the middle of the body.

Mr. Baker's Sheep.

After Mr. B. sends off a lot of fat wethers, he will still have about 200 Merino sheep well, bred and good shearers, but alas, their glory is departed! no one boasts of Merino sheep now. At the Vermont Dairyman's Association, an old wool grower mourned that since there was less tariff on coarse wool it has become fashionable for gentlemen to have suits of coarse cloth. Even Gen. Burnside, when he last saw him, was dressed thus fashionably. He expressed the hope that the fashion to wear fine cloth would soon return again. Mr. Baker has this year used with part of his flock a well bred Southdown buck. Very good mutton lambs are sometimes the result of such a cross.

The Buildings.

The fine new residence recently erected on this farm is worthy of description, especially the dairy department, including rooms for setting milk, making butter and cheese and curing cheese; all of which are large and well adapted to the purposes for which they were designed.

The cellar extends, on the same level, under the house, sheds, carriage and horse barns. The part under the barns is finished off into six pens for hogs, each pen being 9x30 feet with a walk in front, five feet wide. From the walk in front of the pens a door opens to the cooking room, where a boiler in a brick arch is in use. A bushel of potatoes, a bushel of cut turnips and half a bushel of ears of corn are cooked together. A pipe from the cover of the boiler to the chimney conveys thither all the steam and odor that arises in cooking.

Here are seven store hogs, five White Chesters and two Berkshires. This stock of White Chesters are regarded with much favor by the farmers, and several have attained a dressed weight of 600 pounds. I believe the prejudice against the black Berkshires is breaking away, as they prove a thrifty breed and crossed upon common hogs give grades that fatten easily and early. Z. E. JAMESON.

Irasburg, Vt., March, 1870.

REMARKS.—Our cattle market reporter requests us to say that he saw at the Medford market a few weeks since a fine Dutch calf from Mr. Baker's herd on its way to some gentleman in Rhode Island, whose name has escaped his memory. A carload of Mr. Baker's sheep were marketed the same week, but he did not learn the particulars of the sale.

PREPARING RENNET.

In preparing rennet for use, the vells or skins may be either soaked in water or whey. Sour whey is best, and it should be properly purified before using. This is done by taking a quantity of sweet whey and heating it to near boiling heat, when the butter and albuminous matters in the whey will rise on the surface and should be removed with a skimmer. The whey may then be set aside to sour, and when it has acquired a sharp acid taste it is fit for use. Rennet should be steeped in stone jars. Wooden vessels are liable to become tainted, and therefore should never be used. To do the work in the best manner, two jars, say of fifteen to twenty gallons each, should be required. The old rule is to use one rennet to the gallon of liquid, but for fifteen gallons we should add two or three rennets more.

Select, then, say eighteen good sweet rennets and put them to soak in fifteen gallons of the prepared whey. A small quantity of salt may be added. In order to keep the vells from rising on the top, a large stone crock-cover may be immersed in the liquid covering the vells, which will hold them under the surface. After the vells have been in soak for a day or so, they should be thoroughly rubbed up in the whey, in order to extract their strength. They may then be allowed to soak for a day or two longer, when they should be rubbed out again, and the soaking and rubbing continued from time to time for several days.

At the end of a week's time the strength of the vells will be pretty well exhausted, when the liquid should be strained through a cloth and placed in the second jar, and is ready for use. More whey may now be added to the vells in the first jar, where they may be soaked

for a week or more with an occasional rubbing, which will probably extract all their strength, and they may then be taken out and thrown away. The liquor should be kept in a cool, sweet place and occasionally stirred, and if good, sweet rennets have been used, it will have no unpleasant tainted smell.

When water is used to soak the rennets, enough salt must be used to make it a strong brine.

As the sour whey assists the rennet in the process of coagulating the milk, rennets soaked in whey will go further than when soaked in water, and at the same time the liquid prepared in the jar is not so liable to taint.—*X. A. Willard, in Rural New Yorker.*

IMPORTANCE OF GOOD SEED.

To illustrate the importance of high culture and thoroughbred seed, I will mention an instance that has come under my notice the present season. Mr. David Wentzell, of Salem, has two acres of onions, to which he applied fifteen cords of muscle mud of the first quality, and twenty-five cords of well rotted stable manure, measured as thrown lightly into the cart without treading, and probably equal to eighteen cords trodden. He sowed the very best quality of known thoroughbred seed on an acre and three-quarters, then sowed seed grown by a neighbor, of as good quality as the average used; not having quite enough, he bought more at a seed store to finish the field. All came up equally well. On the part sown with thoroughbred seed there is scarcely an imperfect onion, and the crop is the largest in the vicinity. On the part sown with good seed, the onions are ten days later, of inferior quality, and less quantity, and valued at twenty-five per cent. less than the first. On the part sown with seed from the store, (which probably was of about the quality usually in the market,) the onions were still later, of much worse quality, and less quantity, and valued at fifty per cent. less than the first. Any one walking across the field could tell at a glance, and to a row, where the different qualities of seed were sown.

Here, then, is an instance where a field of onions, under very high cultivation, was treated every part exactly alike, except in the quality of seed sown. The thoroughbred seed yielded the value of one hundred and fifty bushels per acre, more than the average quality of seed generally used by farmers who grow their own, and three hundred bushels per acre more than the average quality of seed sold in the market. This estimate is made while the crop is yet in the field, and six hundred bushels of onions, of the first quality, is not an over estimate of the product per acre from the thoroughbred seed.

I have no doubt that the careful selection for seed, year after year, is just as important and profitable in all other vegetable and grain crops as it has been shown to be in the case of the onion crop just cited. The raising of seed may be made profitable, provided the grower conscientiously offers none for sale that is not true to description, and of the best thoroughbred quality, grown from selected stock, years in succession. A few years of such business would secure a reputation worth a fortune, for such seed will always sell at very high prices.—*Mr. Ware's Address at Essex Co. Fair.*

BREAKING STEERS.

If I have a pair of wild steers, (which is not the case when I raise them) I put them into the stable and commence introducing myself to them as their particular friend, feeding them good bits, such as sweet apples, small ears of corn, or sliced potatoes. When in the yard, I secure their friendship by doing the same from my frock. They will soon follow me about. I then attempt to yoke them, and it does not take three or four boys and a dog to help do it. I never leave them to ramble about the fields (as is the custom of some) to turn their yoke and haul each other about. I next give each a name, and when speaking, I apply it. This is more important than many persons imagine. Suppose a man has two sons, and he calls them both *John*. It will be difficult when the boys are together, and a command is given them, to ascertain to which of them it belongs. It is so with steers.

I take them into the road and learn them to travel, that is, walk evenly and quick—stopping often, and suiting my action to the word by stopping myself. I then give something from the *old frock*. I practice in this way a while, and instead of their running from me, they rather *relish* my visits. Sometimes I attach a rope to the bow (never to the horn or nose) as a kind of safeguard in case of fright, and to illustrate the command to stop.

When they will stop uniformly at the word, I put them on a light sled—give them a good path, sometimes let them take the lead of me; stop quite often, and give something to encourage the stopping. When I have nothing else to give, I talk to them of the prospect before them of sometime becoming oxen; of drawing premiums at fairs, and lastly of seeing Brighton market; all of which they seem to understand when explained by a pat or two of the hand.

I soon begin to draw something, loading *light*. One trouble with teamsters of young cattle is, they too soon think they have become oxen, and load too heavy.

Never feed in the yoke; the practice creates a dislike to wear it. Never whip for running away. If you do, you will probably have to run twice as far next time. Never let your cattle draw unless in good position.

Feed well, and be careful of your whips. I will mention an incident in my driving experience, to let the reader know how much whipping and beating my team get from me. When I commenced driving my two-year-old steers, I cut a beech sprout about half an inch in diameter at the butt end, tapering to one-fourth inch, and tied on a small lash. Two years and a half after, when I sold them, I had that same stick in my hand, safe and sound. It was all the stick I used while I owned them. It lasted about six months after that time, when it was accidently trodden on and broken in two, making in all about three year's service.

It pays to have oxen "handy," so that one can drive at any kind of work. I think Dr. Franklin has written:—

"He that by the plough would thrive,
Himself should either hold or drive."

But my steers when they are large enough to draw the plough need no other driver than the one who holds. Therefore I think I can alter that couplet a bit—thus:—

"He that by the plough would thrive,
To save expense, should hold *and* drive."

—*J. M. D., in Vermont State Journal.*

PRESERVATION OF LEATHER.

The following valuable hints in regard to the preservation of leather we copy from the *Shoe and Leather Reporter*:—

The extreme heat in which most men and women expose boots and shoes during winter deprives leather of its vitality, rendering it liable to break and crack. When leather becomes so warm as to give off the smell of leather, it is singed. Close rubber shoes also destroy the life of leather. All varnishes and all blacking containing the properties of varnishing should be avoided.

Shoe leather is greatly abused. Persons know nothing or care less about the kind of material used than they do about the polish produced. Vitriol blacking is used until every particle of oil in the leather is destroyed. To remedy this abuse, the leather should be washed once a month with warm water; and when about half dry, a coat of oil and tallow should be applied, and the boots set aside for a day or two. This will renew the elasticity and life in the leather, and when thus used, upper leather will seldom crack or break.

Don't wash harness in water and with soap. No harness is ever so soiled that a damp sponge will not remove the dirt. When harness loses its lustre and turns brown, which almost any leather will do after long exposure to the air, the harness should be given a new coat of grain-black. Before using this grain-black, the grain surface should be thoroughly washed with potash water until all the grease is killed, and after the application of the grain-black, oil and tallow should be applied to the surface. This will not only "fasten the color," but make the leather flexible. Harness which is grained can be cleaned with kerosene or spirits of turpentine, and no harm will result if the parts affected are varnished and oiled immediately afterward.

EXTRACTS AND REPLIES.

FOOT ROT IN COWS.

I saw in the FARMER, a short time ago, an article in regard to foot rot in cows, and as I have a remedy that I never knew to fail, I will give it to you for publication, hoping that every one that sees it, who has this serious trouble with cattle will try it.

I take one strand of an inch rope, make it as pliable as possible, saturate it with spirits of turpentine and draw it back and forth between the claws of the foot, pulling the rope at the same time, at each end towards the leg. Then apply more spirits of turpentine to the foot. One or two applications has always effected a cure for me.

HORN-AIL.

Take two quarts of leaves and stems of worm wood, pour in enough boiling water to cover it, and let it steep until the strength is extracted. Strain and boil down to half a pint; then add one-third of a pound of fresh butter or sweet cream enough to make that amount of butter, and let it simmer until no steam will arise; then strain, and when so cool that it will not burn, tip the cows head so that one ear will be up, and turn one tablespoonful into the ear; then let her have her head to shake, after which do the same with the other ear, and then cut off the tail until it bleeds well. One or two such applications will effect a cure if taken in season. If this medicine is put in a bottle and corked up tight it will keep any length of time, and I would advise every one that keeps cows to have it on hand. Another sure remedy is to bore the horns with a gimlet and put a half tablespoonful of pulverized saltpetre in each horn. Sometimes I have effected a cure when I saw the cow as soon as taken, by cutting off the tail and putting spirits of turpentine just back of of the horns.

Now a few words in regard to the symptoms of horn-ail. Animals most always have cold horns, with ears inclined to lop down. Sometimes they will shiver continually, with respiration increased sometimes to such an extent that their breathing can be heard several rods. Sometimes they will be so costive that all the purgatives you can give will not cure; but give them medicine for horn-ail, and they are soon all right. At other times they will be taken scouring, and nothing will stop it permanently until you treat them for horn-ail. If the horn-ail is the cause of the scouring or stoppage, you cure it, and the bowels will regulate themselves. I do not wish to be understood that all cases of stoppage or scouring arise from horn-ail, but very many of them do.

I have had a good deal of experience with this disease, and am confident that there are more cases of it than cattle owners think, and that many cattle are treated for something else, when horn-ail is the main disease.

Try the remedies above, if any have occasion, and let us hear of the result. C. A. C.

West Acton, Mass., Feb. 14, 1870.

REMARKS.—Dr. Dadd was very severe on what he called the barbarities to which animals were subjected in treatment for "horn-ail" and "tail-ail." He says that so far as he knows there is no allu-

sion to horn-ail in any of the standard works of English or French veterinarians; and he believes that in ninety-nine of a hundred cases of alleged horn-ail in this country, the trouble is located in some other part of the system. He says that a derangement of the digestive organs is often indicated by cold horns. Our own hands and feet are often cold when attacked by internal disease. Shall they be bored with a gimlet? He accounts for the hollowness of the horn sometimes found by boring, by saying, that in aged animals the bony structure within the horn often collapses or shrinks, forming a cavity. And he accounts for the matter which is sometimes let out by the gimlet, by saying that abscesses sometimes form in the frontal sinews, resulting from common catarrh or "hoose," which would have passed off at the nostrils, if left alone.

In relation to the tail-ail, and to the practice of mutilating this appendage he is still more severe, and unhesitatingly pronounces it an imaginary disease. The soft space at the termination of the bone is a natural growth, evidently intended by nature to perfect the whip with which the animal drives off its insect tormentors.

In our younger days we had a cow that was doctored by a professed cattle doctor, who first bored her horns, and then cut them off. Our experience in the care of those gimlet holes and stubs was such that we are not disposed to recommend the treatment to others.

From our knowledge of the structure of an animals head, we are doubtful of the beneficial effect on a diseased horn of medicine poured into the ear.

The symptoms mentioned as indicative of the horn-ail—costiveness, looseness, coldness of extremities, labored breathing, &c ,—we do not consider as at all conclusive evidence of the existence of any disease in the horns or tail of an animal.

WEIGHT OF GOOD AND POOR MILK.

Which is the heaviest, rich milk,—that which will produce the most butter according to quantity,—or poor milk? Some of my neighbors have expressed an opinion on the subject, but I do not pretend to know, and should like to be informed.

Morristown, Vt., March, 1870. O. LYMAN.

REMARKS.—The books tell us that milk is a little heavier than water. If a certain quantity of water weighs 1000, (grains or ounces,) the same quantity of milk will vary from 1025 to 1031. But as there are "sugar of milk," "caseine," and "various salts," as well as cream, in milk, the superior density of milk over water may be owing to some of these other ingredients; as we must conclude from the fact that cream rises to the top instead of settling to the bottom, that it is lighter than milk; and consequently that the more cream or butter there is in the milk the lighter that milk must be. When milk is examined with a microscope little globules of fatty matter are seen which are quite distinct from the watery fluid in which they are suspended. These globules, enclosed in a thin membrane which must be broken to make butter, constitute the chief portion of cream. Mr. Flint in his book on *Milch Cows and Dairy Farming* gives the result of some experiments made to test the weight of milk and cream by an instrument divided into degrees.

Pure milk was marked	100°
Thin cream	66°
The first pint milked from a native cow	101°
The last pint, strippings, from same cow	86°
The milk of a Jersey cow	95°
" " an Ayrshire cow	100°
" " a Hereford cow	106°
" " Devon cow	111°

It is said that a feeding of salt given to a cow will, in a few hours, cause the specific gravity of her milk to vary from one to three per cent.

In this connection perhaps the following table of analyses of milk, from the *American Cyclopædia*, will be of interest.

Constituents.	*Cow.*	*Ass.*	*Goat.*	*Ewe.*	*Woman.*
Water	86.28	91.65	86.80	85.62	89 20
Butter	4.38	0 11	3.32	4.20	2.60
Sugar of milk	5.27	6.08	5.28	5.00	6.00
Caseine and albumen	3 80	1.82	4.02	4.50	2 00
Various salts	0.27	0.34	0.58	0 68	0.20
Total	100.00	100.00	100.00	100.00	100.00

COW MILKING HERSELF.

I have purchased a cow that is "too well educated," having acquired sufficient knowledge of that sort of labor familiarly known as "doing chores," to milk herself.

She has a good share of Alderney blood, and is a valuable animal, and I wish to know the best method of curing the habit. Slitting the end of the tongue is recommended, and although a little severe at first, looks to me to be less so "in the long run," than wearing a double collar as a muzzle with sharp nails, especially in fly time. I wish to know whether slitting the tongue will be attended with any danger from bleeding, or serious inconvenience in eating, &c., &c., also how long a slit to make. WM. F. BASSETT.

Hammonton, N. J., Feb. 1, 1870.

REMARKS.—We abhor all mutilations of this nature. A simple strap round the nose, with points in it, with another strap buckled on top of the head, has always answered the purpose with us. It is light, does not prevent brushing off flies, and pricks the udder, or surrounding parts sufficiently to prevent sucking. At any rate, do not "slit the tongue."

PLOUGHING UNDER MANURE.

I wish to inquire through your paper the best method of applying green manure to land intended for corn. My custom has been to spread the manure and plough in about seven inches deep under the sod.

Last year I ploughed the land in autumn; before planting in the spring, spread the manure on top of the furrow, then passed over the furrows with a cultivator, and harvested forty bushels of corn to the acre. Does the strength of the manure pass off in the air, or is it absorbed by the soil? And will it benefit future crops as much as when turned under the sod? E. F. SHERMAN.

East Dover, Vt., March, 1870.

REMARKS.—The plan of spreading green manure upon the sod, and ploughing it under four

to six inches deep, is a common one. But we prefer the mode which you adopted in applying the manure to the furrow and working it under a little, say two to four inches. In this way, there is little or no loss by evaporation from the manure; for as soon as fermentation takes place, and gases are given off, they are taken up at once by the fine soil, and held there to act upon other matter in the soil, and eventually feed the plants.

It is quite doubtful whether manure ploughed under seven inches imparts to the first crop any thing like its full power. If the land were ploughed eight inches deep the succeeding year, and thoroughly mingled with the soil nearer the surface, it would undoubtedly be of considerable service to the crops growing upon it.

The *best* way of applying manure to the soil is to plough it under in its fresh state, even before it cools, if that were practicable.

NON-BEARING GOOSEBERRIES.

Can you or any of your correspondents tell me why my gooseberries don't bear? They were taken from a pasture five or six years ago, and set in a moist, rich soil, just as I see recommended by Mr. Fuller in the last FARMER; but mine have not borne a single berry since they were transplanted, although they have grown very thriftily and blossomed profusely every year. The blossoms all blight and fall off before the fruit sets.

Alexandria, N. H., March, 1870. I. L. P.

REMARKS.—No, we cannot tell. Did the bushes bear in the pasture, where you found them? We can recommend one that *will* bear,—the *Mountain Seedling*. It grows uprightly five or six feet, is a great bearer, does not mildew, and the fruit is excellent. We have raised it for a dozen years, and get a good crop *every year*. Smith's Seedling, Houghton's Seedling, and Downing's Seedling are said to be good varieties. They are cheap, and may be had of any leading nurseryman.

It is important to observe some particular points in the cultivation of the gooseberry.

1. It must have a moist, rich soil.

2. Cultivate it in open ground, or at least, not under trees.

3. Prune it regularly and liberally in November. Allow no suckers to grow.

4. Thin out the berries when they get to the size of small peas, if you mean to get excellent fruit.

5. Cultivate carefully, keeping all weeds and grass away from the bushes.

APPLE-TREE LICE.

Can any reader of the FARMER tell me how to to drive lice from apple-trees? Last season fruit and forest trees were infested by worms' nests. These I destroyed as well as I could, but this spring those trees are literally covered with lice. J. MCALLISTER.

Lee, Mass., March 7, 1870.

REMARKS.—We are not sure what insects are alluded to by our correspondent. By worms nests, we presume he means the tent caterpillar, and by lice, the apple-bark louse. These two insects have no connection, and must be met with different weapons. If it is the bark-louse that covers the twigs of your trees, you have a hard customer. If the trees are not too large the lice may be thinned off by washing the limbs with a composition made by boiling tobacco in lye and then stirring in soft soap that was made cold till it will work like paint. Other substances have also been used. These little scales, which are the dried remains of the mother insect, cover eggs which will hatch out, in May or June, little white atoms, almost invisible to the eye, which will diffuse themselves over the tree, suck its sap, multiply and perpetuate their species until the tree is ruined.

ROOFING.—POTASH TO 100 BUSHELS OF ASHES? SAL-SODA, TO KILL LICE ON CATTLE.

In your extract from the *Country Gentleman*, I find Mr. Neal's roofing consisted of coal tar and road dust. What kind of soil produced that dust? Would common sand answer that purpose?

How many pounds of potash will a hundred bushels of ashes make?

I find sal-soda will kill lice on cattle, applied in the proportion of two quarts of water to one pound of the sal-soda, and it is harmless. L.

Winchendon, Mass., Feb., 1870.

REMARKS.—The article from the *Country Gentleman*, in relation to roofing, was copied as a suggestion, none of the facts in the case being known by us. A fine sand might answer all purposes. All experiments of this nature should be made in a limited and inexpensive, but faithful manner, as far as we go.

The number of pounds of potash in one hundred bushels of ashes would vary with the kind of wood, the nature of the soil upon which the plants grew, with the size of the trees and season when they were cut, and especially in regard to the manner in which the wood was burnt. If burnt in a common fireplace, there would be a larger amount of potash in the ashes than if the wood were burned in the fierce heat under the boiler of a locomotive.

As a general rule and one sufficiently near, perhaps, for agricultural purposes—we can allow from *five* to *seven* pounds of potash for every 100 pounds of clean wood ashes.

WHEAT.—KIND—AMOUNT OF SEED—WHEN TO SOW—PREPARATION OF SOIL AND SEED.

I am about to sow a piece of ground to wheat, but being a novice in the business, I write to you for information. My ground is a clay loam, well drained, naturally, and would produce fifty bushels of corn to the acre. What kind of wheat shall I sow to make nice flour? How much per acre, and when? And how prepare the ground and seed? The land was planted last year to potatoes.

THEO. G. LINCOLN.

Taunton, Mass., March, 1870.

REMARKS.—There are several kinds of spring wheat, the Turkey, Italian, Black Sea and others. Which is best we are not able to say. The amount used by good farmers is from four pecks to eight or nine pecks per acre. About a bushel and a half is pretty near the average.

Make the ground mellow by ploughing and *mixing* as much as possible, and sow as early in April as the soil will permit. Much depends on early sowing. Soak the seed over night in brine of moderate strength.

OLD HOUSE PLASTER—PITCH PINE PINS.

Please inform me if old house plaster is of any use as a manure for fruit trees or grass lands; also if pitch pine pins are of any use for a manure?

Littleton, N. H., Feb. 20, 1870. SUBSCRIBER.

REMARKS.—Old house plaster is quite valuable. Make it fine by pounding, and try some experiments with it on grass land, and about fruit trees.

The leaves of pine trees are valuable as manure, when they are completely decomposed. Used in moderate quantities as a bedding for stock, they would subserve two or three useful purposes. The cattle would lie easier; the leaves would act as an absorbent, and when rotted would be useful as manure.

FEEDING BEES.—WINDOW FARM.—POTATO BALL SEED.

There are many bees kept in this section, and nearly all that have not been fed are dead. I think ours do as well fed on sugar as honey. To feed them on top of a hive, put a box on without top or bottom in it, about as large square as the hive and six inches deep; over this put a wire screen the bees cannot get through. Put sugar in an earthen bowl (never use a tin dish) and pour hot water to it, making a thick syrup; let it stand till cool and the undissolved sugar has settled. Fill a piece of comb with the syrup and place it in the box,—putting a little rye meal in the box.

This wire screen allows you to see when the bees need feed, and also allows the vapor from the bees to escape. A tight box on the top of the hive confines the vapor and it condenses on the feed and renders it poisonous. I dislike glass in a hive on account of the vapors condensing upon it.

The late warm, sunny days have given my window potato field a start. The earth begins to crack open, and I can peak into the hills, and see potatoes about the size of large peas. I have lately heard of new varieties of potatoes being sold for forty and fifty dollars for one potato. Wonder if any of these will prove of a stamp to bring these prices? All who see my new arrangement for plant boxes want them, and since writing my former letter I have concluded to apply for a patent on them, and am making arrangements to manufacture them to sell.

I saved quite a lot of potato ball seeds, and will sell them for twenty cents a paper. I have lately been in Grafton County, N. H., and find potatoes badly affected by the dry rot. People who have raised the Early Rose here speak very highly of them. He who originates a superior variety benefits the country. B. LIVERMORE.

Hartland, Vt., March 14, 1870.

CORN GROWING IN ILLINOIS.

Your promise of "*open ears*," induces me to go much more fully into details than I had intended.

After securing proof seed corn, the next important consideration to obtain a large yield of Indian corn is to thoroughly prepare the ground—pulverizing it three or four inches deep. It has been found when both soil and subsoil are quite clayey, that deep fall ploughing is decidedly better for the corn crop than spring ploughing.

The desirable quantity of compost manure having been ploughed under in the autumn, or distributed on the ploughed ground, during the winter, move the cultivator about the first of May,—set to run four or more inches deep—and with a rightly constructed implement, a yoke of good oxen, led by a span of good horses or mules, can well cultivate twenty acres a day. If many clods or lumps remain, a heavy roller is the next desirable implement, to be followed by the many-toothed harrows. Such a team can well drag over the ground harrows twelve or fifteen feet wide. In about a week further pulverize the ground with similar implements. But if clods are no longer visible, it may be expedient to dispense with other implements than the harrow. Let the ground be well stirred weekly, till past the middle of May, in latitude 42°.

Experiments have been made that show that seed corn will rot in the ground, rather than germinate and grow, when the temperature, where it is deposited, is below 58° of Fahrenheit thermometer. But many weed seeds will sprout and grow luxuriantly below 50° No advantage can be derived by having corn planted more than six days before the plants appear—even when covered three or four inches deep. Yet, one of the well-to-do farmers of our county told me that in the spring of 1867, his seed corn lay in the ground five weeks before it came up. It is not a very uncommon sight in Illinois to see weeds in the corn hills higher than the ears of corn. In proof of bad management, many growers of corn here do not harvest some seasons one-fourth as much sound corn per acre, as do some of their neighbors, from lands originally of like quality.

Most Western farmers think it does not pay to hoe corn. For myself, I would not give the best hand I ever had in my employ, his board to hoe corn for me,—provided I have had the management of the field two years. Yet, the weeds in some good degree must be subdued.

Rockford, Ill., Feb., 1870. J. WELDON.

DESTROYING HARDHACK—RECLAIMING A SWAMP.

I wish to inquire if there is any other way to destroy this bush than by grubbing them up? Here in western Berkshire county there are hundreds of acres of land overrun with it. The bushes get so thick that they run out the grass.

Much of our land would make good meadow if it was drained. The muck would pay for digging to put in the yard and mix with yard manure. I think there is too little attention paid to reclaiming land. I had about sixty acres swamp pasture. I drained it, dug the stumps out, and have got the most of it seeded so as to mow well with the mowing machine. One crop of the hay now will pay for all I expended upon it. J. MCALLISTER.

Lee, Mass., March 7, 1870.

HENS PULL WOOL TO GET THE TICKS.

Having had some experience in raising sheep and hens, I would say to Mr. N. Granger, of Randolph, Vt., that his hens were after the ticks on his sheep instead of the wool. One day I noticed that my hens were apparently busy in pulling the wool from my sheep. On closer examination, I was satisfied that it was not wool, but the ticks that crawled out near the surface of the fleece, that they wanted. Finding that there were many ticks on my sheep, I steeped one pound of tobacco leaves to one pail of water, and dipped my lambs in this solution, and let them run with the flock to rub the lye on the other sheep, and in a few days not a tick could be seen. As wool is in such active demand, we ought to save it all, and I think

if friend Granger will try the above remedy, he will save his wool without destroying his hens.

Massachusetts, March 7, 1870. A. B.

ANTHRACITE COAL ASHES.

Do you consider anthracite coal ashes of any value on any kind of land? From my experience last year and year before, I am of the opinion that there is much more value in it than most people give it credit for. G. C. P.

Peabody, Mass., Feb., 1870.

REMARKS.—This question makes its appearance in agricultural papers about as regularly as the seasons revolve. We have known coal ashes to be put aronnd fruit trees to prevent the growth of grass, and we have known of its being put upon the ground to make grass grow. We know of a grape grower on light soil who regards it as a most valuable article, and we have seen a practical farmer who was loading manure from a yard refuse to accept a pile of coal ashes that laid close by, on condition of carrying it off. Our answer to your question, which we are glad is not more specific and particular, is in the affirmative. We "do consider coal ashes of some value on some kinds of land." And now, may we in turn, ask you for a statement of that experience which has convinced you that "there is much more value in it than most people give it credit for?" And in the meantime we publish on another pege an article upon the subject by Prof. S. W. Johnson, author of *How Plants Grow, How Plants Feed*, &c., which you will thank us for copying.

PRICE OF BEEF.

In the comments of your cattle market reporter last week on the failure of certain Brighton butchers, the fact that they paid too much for cattle was suggested as one cause for their losses. Now will you allow me to ask why should they pay present prices? The weekly reports show that there is no scarcity of cattle, for the number increases from month to month and from year to year. When gold was 280 that was assigned as a reason for high prices. Gold is down, flour, wool, butter, &c., &c., are lower, and why should beef be kept at war prices? It is nothing less than extortion, and ought not to be sustained. If butchers would make up their minds to settle back on prices, drovers would buy for less or not at all, and though farmers might groan for awhile, why should not they, as well as others, share in the loss consequent on peace prices? The people justly demand beef at lower prices, and if any body knows of any good reasons why they should not have it, I should be much pleased to see a statement of them. C. L. S.

Montpelier, Vt., March 17, 1870.

REMARKS.—Our correspondent assumes that butchers are now paying "war prices" for cattle. Do facts justify this assumption? For a time during the war the best cattle were sold at Brighton market for 20 cents per pound on dressed weight; last week the highest figures reached for the choicest animals from the River feeders were 13½c per pound,—and but very few over 13 cents. Really, therefore, present prices are equal to only about two-thirds of the highest war prices!

As to the abundance of supply. A few years ago—say thirty-five or forty—the farmers of New England, besides supplying their own home market, raised large numbers of cattle which were sold to the "packers," and when barreled up constituted one of the staple articles of New England "export." The prices obtained by the farmers were low—gloriously low, perhaps "C. L. S." and his friends "the people" would say. But what was the result? The boys who helped raise these cattle—probably "C. L. S." was one of them—left their fathers' flocks on the "Grampian" and all other hills, for more lucrative employments. And drovers have been obliged to follow the star of empire westward to meet the cattle raisers, until the "long horns" from Texas and from the hunting grounds of the Cherokees fill the sale pens of Brighton market, and their beef is eaten in Maine, New Hampshire and Vermont! According to the statistics of the Agricultural Department, while the population of the Northern and Southern States increased 33 per cent., in ten years, cattle decreased 20 per cent. Last year over two-thirds of all the cattle at Cambridge and Brighton were Western, and we may safely say that more cattle were shipped East from Albany for butchers in the Western part of Masschusetts and in Connecticut and Rhode Island, which did not come to Brighton, than there were New England cattle at market.

In these facts our correspondent may be unable to see any good reason why the demand for cheap beef should not be granted; but in view of all the circumstances of the beef trade—to only a few of which we have alluded,—we would recommend butchers to adopt some other course than that of "settling back on prices," if they would avoid the "extortion" to which they are now subjected.

Our first suggestion to the abused butchers and consumers would be to "settle back on" some farm and, though they "might groan for a while," raise their own rumps and sirloins.

This failing, why not adopt some substitute for beef? The *Utica Herald*, long the organ of the dairymen, recommends cheese as a substitute for beef, and hints at the use of horse-flesh. It says:

If beef continues to remain as high as it ever was in the days when the cow jumped over the moon, and if the supply continues to fall far short of the demand, we must of necessity be on the look-out for a substitute. We are not of those hideously under-delicate people who advocate hippophagy. We would starve first! But there is no necessity for any such extreme measure. Doubtless one cause of the extraordinary decrease in beef cattle is owing to the rapid extension of dairy farming. The manufacture and consumption of cheese is increasing far more rapidly than the decrease in the raising and consumption of beef. As an article of food it is gaining popularity with equal rapidity. Will it ever become a substitute for beef? It is healthy, it is more nutritious, and there is every reason to believe that in the future it will be vastly cheaper. *Nolens volens* we may yet eat cheese instead of beef; but whether that be so or not, cheese is undoubtedly to considerable extent a satisfactory substitute.

With a suggestion from an English paper of good repute among farmers—the *Mark Lane Express*,—we leave "C. L. S.", and all who suffer from the extortionate prices of beef, to "settle back" on whichever dilemma they may choose:—

We do not eat the flesh of rats, but we do of pigs, and yet pigs are among the dirtiest feeding animals of the whole creation. Most people are fond of ham, roast pork, sausages, &c., the flesh of a well-fed pig. And why should not the flesh of a good fat, corn fed rat be palatable and good meat? Who has ever seen a fresh skinned rat without remarking on the delicate looking nature of the flesh? We certainly have never tasted it—indeed should require some very strong testimony as to its flavor before doing so; and yet one cannot help thinking that a nice, plump young rat, fried or roasted, and served up with good gravy and other condiments, would make a very delicious dish.

LAMPAS—HORSE DISTEMPER.

As one of the readers of the FARMER, I wish to inquire, 1. The best way to treat colts that are troubled with lampas? Should burning ever be resorted to? 2. The best way to treat horse distemper or horse all? JASON POWERS.

West Burke, Vt., March, 1870.

REMARKS.—*Lampas* is a term used to signify a tumefaction or swelling of some of the lowest ridges or bars of the palate, in the vicinity of the upper nippers. It may arise from a variety of causes. In colts it is caused by *congestion*, or an excess of blood in the part, in consequence of local irritation from *teething*.

Sponge the parts affected three or four times a day with a weak solution of alum, or an infusion of witch hazel, bayberry bark, or some other astringent; and if the swelling does not subside speedily, make a few slight incisions across the bars with a sharp knife. Burning should never be resorted to.

If by *horse distemper*, friend Powers means the febrile disease of horses associated with the formation of matter between the jaws and about the throat, and which by some writers is called *epidemic catarrh* or *influenza*, and by others *strangles*, the best treatment consists in applying large, soft and warm poultices to the swellings beneath the jaws, and steaming the nostrils two or three times a day with vapor from boiling water. As soon as the swellings become soft by the accumulation of matter, they should be freely opened with a knife or lancet. Laxative or loosening medicines may be given if need be, but nothing should be done to reduce the animal's strength. The food should be boiled oats or barley, or soft mashes of wheaten bread, brown bread, &c. If there is reason to fear that the disease has been communicated by contagion, separate the healthy from the diseased animals, secure cleanliness and good ventilation, and wash the mangers and parts contiguous with a solution of carbolic acid, or carbolic soap.

FILM ON THE EYE.

I would like to inquire through the columns of the FARMER for a remedy that will remove a film from a creature's eye. Have used tobacco juice and fine salt with no good effect. The injury is recent and supposed to have been done by a blow of some kind. A SUBSCRIBER.

Waitsfield, Vt., Feb. 8, 1870.

REMARKS.—Pound and rub alum into a powder, making it as fine as flour. Fill a common goose quill partly full with it, and from that blow it into the eye. But if the eye is bruised by a blow, that is another matter, and the alum would probably do no good.

BUNCHES ON THE NECK AND BACK OF AN OX.

Last spring one of my oxen that had been tied next to a farrow cow, in the stable, and kept near her much of the time when they were in the yard, was troubled with hard bunches and scales all over his neck and back, which itched badly. I gave him saltpetre, &c., but nothing helped him till he was bled, when he apparently got well and did well through the whole season. This spring his skin is in the same condition again. As it is too early to bleed him, can you suggest some other remedy that can be applied now?

Do you consider it hurtful to a horse to eat meadow hay,—not living upon it entirely, but picking over the orts left by the cattle? J. B. B.

Tuftonboro', N. H., March, 1870.

REMARKS.—If it will be a good thing to bleed your ox at all, we cannot see any good reason why he may not have his blood *shed* at one season of the year as well as at another. But we believe there is a better way; and would advise you to feed him plenty of carrots, turnips, or potatoes,—carrots are the best; wash him all over with warm soapsuds once a day; card him well twice a day; and give him, once a day, a tablespoonful of a powder composed of sulphur two parts, cream of tartar two parts, and saltpetre one part; or, if you prefer, give him a tablespoonful of epsom salts every day, instead of the powder.

We should not suppose it would hurt a horse to eat what he would of meadow hay or orts, if he was not starved to it.

BLIND STAGGERS IN HOGS.

I would like to know what will cure the blind staggers in hogs, and what is the cause?

Becket, Mass., March, 1870. P. WILSON.

REMARKS.—To know what will cure *blind staggers* in hogs, we should *first* know something of the cause that has produced the affection; for that disease, like many others, is not always the effect of one and the same cause.

If the animal is constipated, physic him with sulphur, or with sulphur and cream of tartar. If the pores of the skin are closed by an accumulation of dirt, wash him with warm soap suds and keep him clean. If the natural issues on the fore legs are closed, open them by washing and rubbing. If he is too fat and plethoric, like some men and women, physic him and give him less food. Very fat men and women, are diseased men and women, and are very liable to have *vertigo*, which is but another name for "blind staggers;" and vertigo is a premonitory symptom of *apoplexy*. As with men and women, so with hogs.

[Entered according to Act of Congress, in the year 1870, by R. P. EATON & CO., in the Clerk's Office of the District Court for the District of Massachusetts.]

RURAL ARCHITECTURE.

BY GEO. E. HARNEY, Cold Spring, N. Y.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

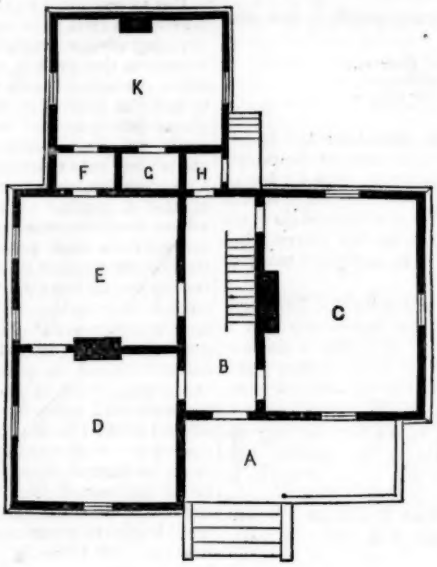
No. 2.--DESIGN FOR A FRENCH ROOF COTTAGE.

This design represents an economical cottage, simple in character and compact in plan, and suitable for a moderate sized suburban lot. It is in the modern French style, designed to be constructed of wood, raised on a banking or terrace and having a split granite underpinning all around it, about eighteen or twenty inches high. The frame rests upon the underpinning, and is covered on the outside with matched boards and clapboards. The roof is covered with the same and shingled—both upper and lower pitch.

The eaves are slightly curved where they project beyond the walls and are ornamented with a row of small blocks or brackets placed close together, as shown in the picture.

The plan is as follows:—

A is a veranda seven feet wide, extending along a part of the front of the house. B is the hall, which measures seven feet by nineteen, and contains the staircase to the second story, under which is the flight to the cellar. C is the parlor, fourteen by nineteen, having two doors opening into the hall, and three windows—one of which—that at the rear, may be omitted to give place for a piano if thought desirable, as two windows will amply light the room. D is a sitting-room or library, four-



Ground Plan.

teen by fifteen, and E is a dining-room of the same dimensions. Both of these rooms open from the hall on the left. F is a small pantry or passage to the kitchen. It is fitted up with shelves for china on either side. The kitchen is twelve by fifteen, and has a store room marked G, and an entry H, leading to the yard, which entry also communicates with the front hall.

The cellar extends under the main house, but not under the kitchen wing, and has an entrance directly from the yard, under the back steps.

The second story has four pleasant chambers, B, C, D and H, and seven closets, five of which are very large. A is the main hall and K is the passage to the chamber over the kitchen. Both stories finish nine and a half feet high in the clear. The interior walls and ceilings are lathed and plastered and the wood finish is all of pine oiled. There are three chimney stacks, so that every room has means of heating. In truth, every room should have an open fireplace, and in houses which we design for the part of the country where we now write, we always provide them, being considered absolute necessities both for comfort and health, and particularly in the sleeping rooms, which at night are usually kept shut almost airtight in every other respect.

This house would cost about $3500.

Chamber Plan.

For the New England Farmer.

THE FLOWER GARDEN FOR APRIL.

April, the second spring month, is now with us, —

"The month of showers,
The month of flowers,
The month that cheers,
The month of tears,"

As the old rhyme runs. March was true to her proverbs, and gave us a taste of December and January combined, but we hope for better things in this month. New England is so far "left out in the cold," that we cannot do much gardening in the open air at this season; but we can purchase our seeds and plant many of them in boxes, in-doors.

An upper chamber, where the sun lies warm most of the day, can be improvised into a miniature green house. If it has a dormer window in the roof, so much the better; place an old table directly under it, and set your boxes upon it.

The soil for these boxes can be dug up from the richest parts of the garden, and baked in old pans or boxes in the oven till it is thoroughly heated through. This process kills all the minute worms and larvæ, renders the soil friable and loose, and makes it desirable for seed planting. One-third of scouring sand, to two-thirds of garden loam is a good mixture for such purposes. We listen yearly to complaints that the seedsmen "Do not sell fresh seeds; their seeds will not grow, etc., etc." You must learn how to plant before you indulge in murmurings and complaints. When your soil is prepared,—and it is an excellent plan to sift the earth, for then there are no lumps to stifle the young life of the seed,—fill the boxes. Old raisin and cigar boxes are the easiest to handle; but starch and soap boxes will hold the most seeds. Fill them up to the top with the baked earth; press down the soil firmly with a trowel or the fingers; and sprinkle the seeds *sparsely* over the place thus made ready. If the seeds are very small like *Petunias*, *Lobelias* and *Portulaca*, pressing them into the soil with the hand will cover them sufficiently. More than half the failures to germinate these seeds, arise from too deep planting. Tiny, little mites, they cannot grow if covered half an inch deep with soil. *Sweet Peas*, *Tropœolums* and seeds similarly sized, should be planted an inch deep,—the former flourish better if sown three inches in depth; and they can be planted as soon as the frost admits of a bed being dug for them. If planted early in this month they will bloom early in June. Eight weeks from the time the seeds are sown, will often be time enough to produce the sweetest of sweet flowers. They make a beautiful hedge to a garden and will protect more tender flowers from the cold winds. Frost does not often injure them. The new varieties are exquisite. The scarlet and white are great additions to every garden. None of us can have too many *Sweet Peas*.

But to our planting. Sand is a great *desideratum* in seed planting. It is the lightest covering we can procure; it attracts the sun; stimulates the growth, and no one can raise either cuttings or seeds in perfection without its aid. A pan of it well warmed, must be placed beside us, and be used to cover all the seeds we plant. *Asters*, *Balsams*, *Zinnias*, and all our pets must be planted under sand. The three flowers named above should be planted a quarter of an inch deep. When all our desirable seeds are stowed away, reserving from each paper about one-third of its contents to plant in the open ground, for a succession of flowers, we must sprinkle the surface *thoroughly*. If there is not a fine nose watering pot at hand, we can improvise a summer shower with the aid of a small hand broom, dipped in *quite warm* water. The warm water must be daily used; one watering with cold water from pump or aqueduct might kill the life of young seedlings. When the boxes are all watered, old pieces of flannel or cotton flannel dipped in hot water should be tightly pressed over the surface of them, and water the seeds through the cloths until they begin to germinate. If the seeds are very rare, cut holes for each tiny leaflet, and keep the flannels on until all are started. By this process the most difficult seeds can be forced. It is nearly equal to a hot bed, and little fault will be found with the seedsmen, if our readers adhere strictly to our directions.

Now our seeds are planted, and many of them sprouted they will require daily care. They must not be kept so warm that when the seeds sprout they look as though grown on stilts; they must have fresh air daily; an hour between twelve and one o'clock, if the sun shines fairly upon them, will be none too much, and when the plants have put forth the second and third row of leaves, they can be safely stimulated with very weak guano water; one teaspoonful to three quarts of warm water will hasten their growth, if it seems to require it.

All annuals excepting the tap-rooted varieties, like *Mignonette*, *Larkspur*, &c., require transplanting, and produce much finer flowers by such treatment. As soon as they show the second leaves well developed, they should be transplanted into small pots; four plants can be placed around the outer edge, and one or two in the middle. By transplanting, a greater growth of fibrous roots is produced, and if the operation is performed at night, the plants do not seem to be aware of their change of base. Last year we transplanted from necessity a large number of plants after six o'clock, P. M.; not one withered.

We would advise our readers to plant biennials and perennials, as well as annuals. To be sure, the first named flowers will not bloom until another year, but their beauty well re-

pays us for the lapse of time. *Canterbury Bells*, *Sweet Williams*, *Foxgloves*, and many other varieties are all indispensable in our borders and *parterres*. The new varieties are exceedingly improved and very desirable.

Perennials will bloom the first season, if planted very early, and if hardy enough to survive our wintry winds will blossom early the ensuing season. *Perennial Larkspur*, and *Lupin*, *Pentstemon*, *Scarlet Lychnis*, *Columbine*, &c., are all very ornamental and desirable, besides hosts of others too numerous to mention.

Our old favorites and stand-bys, *Asters*, *Balsams*, and *Pinks* in all their varieties are indispensables. *Asters* are nearly unequalled. Among all the annuals of the day, they rank supreme! Their coloring is so diverse, their petals so perfect! The *Rose Aster* is well named; it is as perfect as its namesake; but alas! it lacks its fragrance. It is earlier than the large flowering *Imbrique Pompone*, and *Pœony Perfection* of Truffaut. It grows two feet in height, the flowers are double to the centre, the outer petals are perfectly placed, and of great substance. A plant in full flower is a marvel of beauty. These *Asters* are produced in every color, from a brilliant red to a perfect peach-blossom, and the purest white. A packet of these seeds sowed and cultivated in a large box, are a garden by themselves, and could be kept during the summer on the roof of a piazza, if there is no garden attached to the house. Twenty-five cents would be the only outlay for the seeds; and the earth can be procured at any greenhouse.

To grow *Asters perfectly*, the soil should be very rich. Superphosphate of lime dug around the roots of the plants in June greatly enhances their beauty. Guano water should be given them at least twice a week. The plants must be set at least a foot apart, so as to allow the fullest growth of leaf and branch. Each plant should be tied to a small stick, for a heavy wind or rain may break it down. They should always be mulched in July and August with coarse manure, dry leaves or tan bark. The plant delights in a rich, moist situation.

The *Dwarf Asters* are one of the prettiest of the Tom Thumb plants. They are only six inches in height, and one mass of flowers.

Zinnias have reached a great state of perfection. The flowers are far more beautiful than dahlias, and of every hue of red, crimson, pink and orange. It is claimed that a pure white, fully double *Zinnia* has been produced by the French florists. Such a flower would be a great acquisition!

There are many flowers which are common in old country gardens and endeared to many of us from the earliest associations of childhood, which are so disguised by the nomenclature of science that we fail to recognize them. Who would look for a *Lady's Delight* in a *Cyams*? yet that is the name set down for it in the catalogues. *Tagetes Signata Pumila* is a very high sounding name for *Marigold!* It would seem as if the florists vied with each other in prefixing the longest possible names to the smallest flowers.

Salpiglossis and *Schizanthus* are both most desirable annuals, yet their names do not proclaim their attractions. Would it not be better for the purchasers of these beauties of the garden if more attractive yet simple names could be given to the lovely flowers of the seasons?

S. O J.

For the New England Farmer.

CHAPTER ON OATS.

To him whose desire is for new kinds of Oats.

Perhaps the result of experience during about twenty years may not be uninteresting to you, and as failure has been the result in a majority of trials, I will not withhold the acknowledgment thereof. The faithful report of bad luck and ill success in any similar experiment, I deem not only a duty to the public but a great advantage in these—our times. Therefore, brother farmers, send in the account of failures as well as successes, whether with the Norways, the Early Rose, or any other new variety of farm crop.

In 1852 I purchased at one dollar per bushel some new seed oats of a man in Townsend, Mass., weighing over forty pounds per bushel. They were called *Kentucky Oats*. The price was very high for those times. They were brought to this place and produced a fair crop in bushels, and a good crop in pounds, weighing about forty-two pounds. The crop of 1853 from the seed of 1852 was sold in Boston to Nourse, Mason & Co., who sold them at about three dollars per bag of two bushels. The crops of 1854 went to the same market. These oats I continued to raise until the war, when being away from my farm, the occupant lost the seed.

I have now the same kind of oats from seed distributed through the Agricultural Department, and which I regard as a profitable crop. They may be "Surprise" to some, but to me they are not; and it is probable many will discard them because the threshers do not make as many bushels by measure as of the common oat. Their weight, and general exemption from rust, however, I think more than an offset.

In 1857 while canvassing for the NEW ENGLAND FARMER in Franklin County, Vt., I purchased a bag of *Tree Oats* said to have been introduced into that region from remote Canada, and to produce a wonderful crop. These were sown but one year and were a total failure by reason of blight and had no superiority over the horse-mane oats.

In 1868, the members of our Farmers' Club, made an arrangement for the Norway Oat. We could not buy for less than ten dollars per

bushel, but we could get *seventy-six quarts* for a bushel and a liberal bonus to the one who would guarantee the pay. They were recommended to weigh forty and more pounds per bushel. The result of the crop raised from this original seed proved to us that *seventy-six quarts* might produce the forty pounds, but in some cases it would not. Our seed was from the great originator of this kind of—"trade mark," as you justly term it in your last issue.

Sowing according to directions, one-half bushel on one-half acre of ground which produced excellent corn in 1867, I raised about *seven and one-half bushels* of Norway oats by weight, of thirty-two pounds. This field was never excelled in lodging, though not from heavy growth. The crop was a failure.

In 1869, a piece of one and a half acres greensward was ploughed and well manured and stocked. One acre was sowed with the Dodge or Rio Grande wheat, the last day of April. The half acre was sowed a week later with Norway oats, and was the best part of the field. The wheat grew very large, stood up well and gave me twenty-seven and a half bushels of extra heavy wheat, while the half acre of Norways began to rust and wilt over about the time they began to head out, and before the few single heads that filled were ripe the whole field was a mass of rusty straw, the worst field I ever saw. The result at threshing was *twelve bushels of hulls* that would not equal so many pounds of good hay in value—less than twenty pounds per bushel by weight.

This piece of ground is on a high hill, facing the south, and was very thoroughly harrowed and leveled, and could not be in better condition for a crop. The entire piece, though very sideling, was cut with a Wood's hand-rake reaper with success, and in a little more than an hour's time. There were six hundred bundles of wheat, nice and straight, but the oats lay in shapeless bunches as large as could be carried on the apron of the reaper—ready for the fork.

Two other fields on farms adjoining were but little, if any, better.

The verdict is almost unanimous among all our farmers that the common oat is very much better than the Norway, and while the former can be grown with ordinary success, the latter is a very uncertain crop, and is not worthy our cultivation.

And now I will give you one more trial which has been a fair success. Last spring a barrel of black oats from Prince Edward's Island, was ordered of an egg dealer in Boston. The oats were plump, black and heavy, and were in the original barrel in which they came with the eggs from the Gulf of St. Lawrence. Their weight was about forty pounds per measured bushel.

The crop from this trial was between sixty and seventy bushels of fine, heavy oats. I am feeding them to my team and see no difference between them and the common white oats. I shall continue to raise these and the oats from the Agricultural Department, but no more Norways.

Any one can thus change his seed and get oats from an extreme northern climate by purchasing of an egg dealer in Boston annually, or less frequently, and thus keep a fresh change of seed, which often proves advantageous.

GEO. F. NUTTING.

Randolph, Vt., March 2, 1870.

VEGETABLES.

The following extracts are from the Report of JAMES J. H. GREGORY, of Marblehead. They will afford many good suggestions to the farmer and gardener in his spring sowing of seeds. Mr. Gregory has large experience in his profession, which, being aided by an extended and careful observation, qualifies him to become a safe adviser in matters pertaining to the subjects of which he speaks. The report was made to the Essex Agricultural Society last fall.

The report is not only valuable as a guide in our present spring sowing, but as showing the inconsistency of awarding premiums at our autumnal shows to vegetables of mammoth size, but utterly unfit for table purposes:—

Any thrifty housewife who was compelled by untoward circumstances to drop into the dinner pot an onion weighing one pound, or a turnip beet weighing six pounds, would consider herself unfortunate, and when "boiled dinner" came to the table John would not be expected to go into raptures over the thick, coarse sloughing layers of the onion; or the stringy, flavorless beet.

An onion is grown for table use only, and as a rule turnip beets are grown for table use only; why then should a false standard be encouraged on our exhibition tables by awarding premiums to specimens of these two vegetables, whose size would render them utterly worthless for the table,—the only use now made of them!

THE CARROT has a double use, being cultivated for the table, and for stock; for our tables we want the sweetest, the finest grained, and the richest flavored of all the numerous varieties. This we have in the *Early Scarlet Horn*, the earliest of all. * * * * The *White Belgian* will yield a quarter more than any other variety, and growing partly out of the ground, a large part of the crop can be pulled by hand.

THE PARSNIP. This root is at present grown almost entirely for the table. * * * Shallow, dry, or anything but the richest of

soil is unpropitious for a good growth of the parsnip; but *peat meadows are most excellent* for growing the parsnip, and all other roots to the largest size. When the best result is sought in our Jersey cows, in the condition of the stock, and quality of butter and milk, then the rich, sweet parsnip will have its day. For family use, Abbott's and the Student's, are preferable, while for shallow soil the little turnip rooter, is a gem.

THE BEET. I believe of beets, as of parsnips, that a day will come when the condition of quality will so far enter into our consideration, that we shall grow the turnip and long blood beet to feed to stock. By planting early in the season in rich soil and *thinning to a foot apart*, a growth of from 10 to 12 lbs. can be attained, and I have had isolated specimens weigh over 20 pounds!

THE MANGOLD WURZEL, to be excellent, ought to be planted on high ground; if for increasing the *quantity* of milk, on low ground. Sow not earlier than the first of June for the Long Red. The Yellow Globe is a good sort for sandy soils. If our farmers would be brave enough to have their rows 30 inches, and thin their plants to 15 inches apart in the row, when young, they would find that they could do about all their tillage with the cultivator and hoe, while they would have *just as much weight of crop*, and the pleasure of handling mangolds as big as their thigh, instead of as big as their arm.

THE TURNIP. As turnips are grown both for family use and for stock, we need to encourage good specimens of all sizes. Of the Ruta Baga or Swede class, the best for family use is the white variety known as "Sweet German." Of the Yellow variety, Laing's, London and Shamrock Swedes are now preferred. Of the flat turnip, the White and Purple Strap-leaf are the earliest, but Yellow Finland, Improved Yellow Globe, and Cowhorn, are less subject to attack by the worm.

THE ONION. The standard for the table is found among those not over three inches in diameter, with a fine, close skin, thin, compact layers, a small neck, with the whole bulb feeling about as hard as a stone. The Early Red Globe, and Early "Cracker" are good varieties, but the Early Danvers rules the market in Essex county. The Potato onion is the earliest of all varieties. I would advise all farmers to plant a quart or two of the potato onion setts to be used in the family before those raised from seeds get sizable.

THE CABBAGE. The Marblehead Mammoth is the standard cabbage in Essex county. For distant markets the Stone, Mason and Fottler become standard sorts. For family use the Savoy family are decidedly the best. The early Ulm Savoy is early, and as reliable for heading as any cabbage grown.

THE SQUASH. The Boston Marrow is, of all others, the pie squash. The American Turban for a fall squash, and the Hubbard for winter use, are, perhaps, the best we have.

These brief extracts from Mr. Gregory's capital report, we think will be valuable to every cultivator of vegetables. They may rely on his authority as to what is best among the many varieties cultivated. We suffer continually by using, not only poor seeds, but poor varieties, and there seems to be no way of protecting ourselves, but by purchasing of upright men who understand their business.

RAILROAD TRANSPORTATION.

During the war the price of railroad freights were greatly increased, particularly at the West, but as the price of produce was also high, farmers had little cause to complain. But since the close of the war and the consequent decline in prices for farm products, there has been a good deal of complaint on the part of Western farmers that the cost of transportation is kept at war prices. In some cases there it is said that one-half or two-thirds of the price of a crop is expended getting it to market, and that more is paid to the railroad for transporting a crop across the State than the farmer receives for raising it. The *Prairie Farmer* says, "there is no question of the fact that the present tariff on farm products is doing much to discourage persons from engaging in agriculture. Thousands of acres of land are laying idle, for the reason that persons hesitate to improve it, for fear that railroad charges on the crop will eat up all the profits that would arise from cultivating it. It is the study of farmers now to ascertain what crops can be produced that will involve the least cost of transportation, and to devote their attention to them. As high rates of fare discourage railway travelling, so does a high tariff on farm commodities prevent their being transported, or even produced. Our land is far less valuable, and much poorer cultivated than it would be, if the cost of transportation was reduced."

The same paper publishes a call for a convention of "those opposed to the present tendency to monopoly and extortionate charges by our transportation companies, to meet at Bloomington, Illinois, on the 20th day of April next, for the consideration of the present charges for the transportation of freight by chartered companies and the devising of means that shall have the effect to reduce them."

We presume that this convention will also take into consideration the importance of a home market. Without this, even low charges for transportation to either side of the Atlantic will afford but a temporary or partial relief.

—Careless feed, irregular drink, and rough usage after hard service, cause most of the complaints from which horse-flesh suffers.

CULTIVATION WITHOUT MANURE.

WHEN land is once in good condition, much may be done towards keeping it in that condition, by the use of other means than the application of manures. These means may not always be cheaper than manures, but they are within the reach of the cultivator, when it may not be possible for him to obtain manure. We will specify several of the means which may be resorted to.

First. A judicious rotation of crops. This will not *add* much to the fertility of the soil, but it will *prolong* it. Some plants draw their nourishment more largely from the atmosphere than do others. Thus clover and turnips derive their nourishment from the atmosphere much more largely than do cereals. Of course they exhaust the soil less, and should therefore be followed by cereals. Potatoes appropriate a large amount of potash, and may properly be followed by some crop into whose composition lime enters more largely.

Second. Mixing soils. Meadow soil which yields only sour grasses, when once thoroughly drained may be greatly improved by mixing with it sand or gravel. These change its texture, and let in the air. They furnish silex to the stems of grasses and oats, and improve their quality. So the mixing meadow soil or muck with sandy loam, furnishes the humus which is wanting in such soil, and serves to retain moisture and ammonia. When such soils are thoroughly mixed, the compound soil thus produced is entirely different from either soil before the mixture was effected, and may be used to raise crops that could be raised profitably upon neither.

A similar result follows from the mixture of clay and sand. The mechanical condition of both is improved, and a soil is produced which will yield fine crops of grasses and clover. A mixture of clay, sand and muck will produce a fine soil for most garden purposes. If such a compound soil is thoroughly mixed and made fine, and quickened by the wash of the house, a good crop of garden vegetables may be annually produced. Fresh muck or clay or both should be added from time to time. Many a village family might in this way continue to have a profitable garden, where manure cannot be obtained.

In all cases where attempts are made to cultivate in this way, thorough mixing and pulverizing of the soil is indispensable, as is frequent stirring of the soil in the after cultivation. The nitrogen is not in the soil. It has not been put in with the manure, but must be drawn from the atmosphere, and this can be done only by frequently presenting new surfaces of the soil to the action of the air. Hence the less manure the greater the necessity for frequent ploughing or stirring of the soil.

Third. Turf, upon a tolerably moist soil that has been occasionally top-dressed with manure, or treated with plaster, becomes a solid mat of roots. This may be made the means of yielding good crops of potatoes, corn or other cereals.

The quantity of vegetable matter capable of being converted into plant food, in an acre of turf, is much greater than most persons imagine. An acre contains 43,560 feet of surface. At one foot deep, this would be 43,560 cubic feet, or 348 cords. Turf eight inches deep would yield 226 cords. Suppose this to be half vegetable matter there would be 113 cords. If this had not been ploughed for eight or ten years it would be more than half vegetable—dead or living. In many old meadows or mowing fields, the roots become so thick, that the culms of grass they produce are both fine and short. The turf upon such lands is worth more as a manure for other crops than for the grass it yields. The 113 cords of vegetable matter it contains will make a generous dressing for corn, hoed crops or grains. If after it is broken up, a small quantity of ashes, of lime, of plaster, or of all three be added, what more can be needed? Let such a turf be ploughed deeply, and worked fine with a Shares' harrow, and roller, and furrowed for the rows, and ashes or lime, or superphosphate be put in the furrows, and we may reasonably expect a good crop of corn. But this vegetable matter will not all be rotted down into plant food in one year, and another thorough ploughing and working will give a good crop of wheat or oats—and then it will

be in a condition to seed down to clover, red-top and Timothy. Of course the addition of plaster or bone will increase its fertility. It is now prepared to go on and yield good crops of grass until another good turf is formed. The process of forming thick and strong turf is greatly facilitated by allowing the second crop to decay on the ground. It protects the roots during the winter, and its decay in the spring furnishes them the very nutriment they need.

The process of reducing such a turf into a condition to be converted immediately into plant food requires much labor. But many men can command the labor who have not the manure, and even if they can purchase the manure it may be better for them to substitute the labor for the manure, especially if they do it with their own hands and their own teams.

There are several other methods of improving the fertility of land which deserve attention, such as green crops, irrigation, &c.; but these are entitled to a separate consideration.

For the New England Farmer.

EXPERIMENTS WITH MUCK.

I noticed in the FARMER of March 5, a communication signed by O. J. Upham, condemning meadow muck. Now I think if more of our farmers had less fog and more muck on the brain, that many of our farms would pay larger dividends. For the past fifteen years I have been a close observer in the use of meadow muck, and the different modes of its application to the soil.

On all soils of newly cleared land, or those receiving the wash of high lands, and land of a swampy nature, or that which is rich in vegetable matter, the application of clear muck will have no visible benefit. But use the muck as an absorbent in barnyards, pig styes, for slops and suds, and you have an article that will make any land laugh and grow fat. The greatest benefits, however, are seen from its use on sandy soils, or soils that have been worn by long use in tillage or grass growing, without returning an equivalent in the shape of manure of some kind.

Four years ago, other parties and myself purchased a peat or muck swamp and commenced ditching. We have since been using the muck taken from the ditches, in composting and in various ways, to test its value as a fertilizing agent. The first year one used it thrown under cattle in stables and in his pig styes to the amount of one-half muck and one-half manure, doubling the amount of manure. The result of all crops raised on land manured with the same was a better show through the season than the same crops on the same soil with clear stable manure. In fact, on one field of corn, a part of which was planted with the muck compost, and a part with an equal quantity of clear barn manure in each hill, a difference in favor of the muck could be seen as far off as you could see the field while growing, and on harvesting the corn or the muck made much the best show.

Another one of the company composted in the field; the proportions being about one load of manure to two of muck, shoveling it over four or five times before using, during the fall and spring. In the spring, when he was throwing it from the cart into the hill, his father-in-law came out and asked him, "Do you expect to get any corn this year from that stuff? If you do, I will own up that the meadow is all manure!" The result was as good a stand of corn as had been on the farm for fifteen years, and all other crops planted on it did equally well.

My own experience has been the same. Having tested it in various ways, I prefer muck and manure, well composted, in equal parts, to clear manure. Two years since I drew and left in a pile under a stable window, where manure was thrown upon it in the winter, two loads of muck which laid in that state till I drew out my manure in the spring, which I put in the hill on corn, using the clear manure until I came to the muck. This was then used the same as the manure. I marked the part of the field on which the pure muck was applied, and the result was, that on the clear muck the corn came up with a nice dark green color, which it kept through the summer, making a rank growth of stalk, and earing and ripening well. On the clear manure it came up well, got about one inch high, turned yellow, stood about still a week or ten days, when it began to grow and turn green, and made a fair crop; but it never overtook that on the muck, and I should say there was a difference of nearly one-fourth in favor of the muck in the crop.

The soil on which I experimented, is light and loamy, and that of other parties a sandy loam.

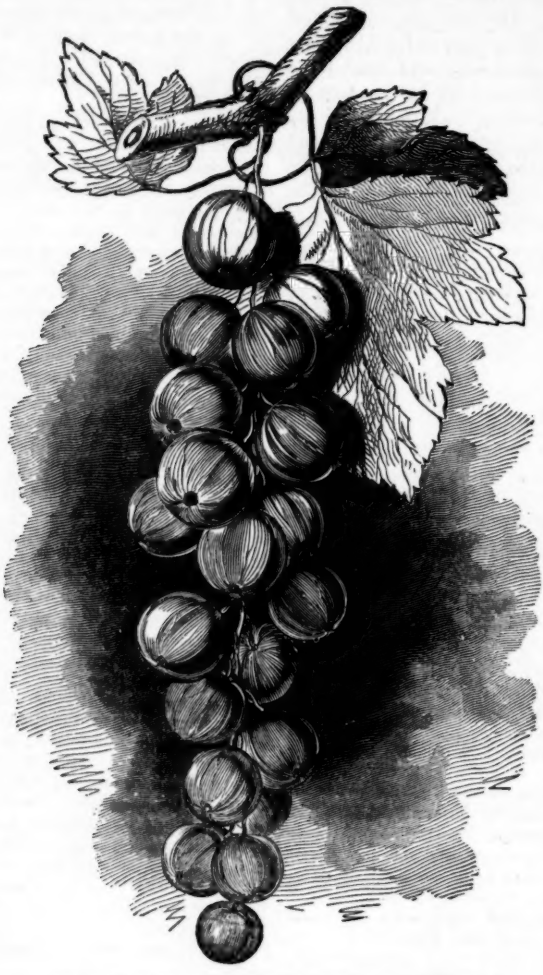
The above has been my experience in its use for four years, and I am living near where it is sold for one dollar per load, in large quantities, and applied in its natural state directly to poor sandy soils, with nearly as good results as from clear manure.

I will say no more on the subject this time, except to add that I am glad to have the subject aired, as I believe it to be one of vast importance.

LORIN BARRUS.

Goshen, Mass., March, 1870.

—The Vermont State *Journal* says, the Canadian exodus has already commenced this spring. About five car loads pass through St. Albans daily, for the south and east.



DANA'S TRANSPARENT WHITE CURRANT.

Mr. Fuller, in his *Small Fruit Culturist* says that the currant was probably a native of Northern Europe, as it is not mentioned by any of the Greek or Roman writers, who were generally particular to name every fruit known in their day. The English name of currant, or corrans, as they were formerly called, is supposed to have originated in their resemblance to a small grape largely imported from Corinth. Though they have been grown in this country from its first settlement, it is not until recently that they have been cultivated to any considerable extent for market, as the price has not been remunerative, but the growth of the cities and manufacturing villages of New England has of late been so rapid, and so great improvements have been made in the modes of preserving and working them into jellies, &c., that the demand at present is ahead of the supply, and prices in many places justify their more extended cultivation.

In most of the old gardens of New England the currant will be found in some neglected

corner, where it is left to fight its way with grass and weeds, without care or cultivation; but few plants enjoy good soil, heavy manuring and clean culture better than the currant, and where a fair price can be obtained, few will better repay extra attention. The currant succeeds better in a heavy loam than in a light sandy soil. Mr. Fuller recommends four feet each way—2722 plants to an acre,—as the proper distance for the plants, which, when grown, will yield at two pounds per plant. 5,444 pounds,—all of which looks well on paper, and here we leave it, the currant worms and all.

The above cut was drawn and engraved for the NEW ENGLAND FARMER from a bunch of white currants, of a variety originated by Mr. Francis Dana, of Roxbury, Mass., and is a fair representation of the berry and cluster, which is the largest of the whites, nearly equal to the Cherry currant in size, less acid, and of excellent flavor. Mr. Fuller says that he has been exceedingly unfortunate in procuring this variety, having purchased from what he supposed to be a reliable source, five distinct varieties, under the name of Dana's White.

CRUELTY TO ANIMALS.

The Boston Society for the Prevention of Cruelty to Animals is doing a good work. We wish its influence might be felt in the country sometimes, as well as in the city. Its first duty, however, it seems to us, is to visit the Superintendent of Streets, or whatever officer has charge of the horses belonging to the city of Boston, and explain the slow and protracted *torture* occasioned by the use of the "check-rein," and insist upon its disuse.

The wicked genius of a Nero could scarcely have devised anything more painful than is the use of the check-rein. He tortured by fire and sword, but the pangs were soon over. With the horse, they are constant. Ten hours in a day, and some 300 days in the year, certain of his muscles are drawn out of their natural position and kept there by pulleys and straps until the pain becomes almost intolerable. The poor animal throws his head first on one side and then on the other, throws his nose into the air, and tries in every way to drop his head, in order to gain momentary relief. This whole arrangement is unnatural and cruel. The animal is constrained by it. It induces loss of strength, disturbs the vital force, and causes painful action in the muscles of the neck, head, shoulders and mouth. When the check-rein is loosened the horse *always* stretches out his neck and hangs down his head.

How would a man look wheeling a dead horse up a hill, with his own head tied back by a strap passed over his shoulders and fastened to the ends of the wheelbarrow handles! This is the position in which he places the horse, instead of allowing him the free use of his own weight to force along the load!

The use of the check-rein is a foolish and unscientific fashion handed down to us from our British ancestors. The French, Spaniards, Germans and Turks, do not use it. The Indians and Spaniards of South America, who literally live on horseback and are perfect horsemen, do not use it.

Let us discard this cruel torture of one of our most useful and faithful of domestic animals, and let the *Boston Society* take the initiative, and see that the worse than "thumb-screws" are taken away from the noble animals employed in the service of the city.

We have plead with them in vain, now we hope to see what associated effort will accomplish.

It is the opinion of those of great experience, that a pair of horses when freed from this useless tackle, and left to step in freedom, would plough nearly a fourth more land in a day, and with greater ease to themselves, and less fatigue when the day's work was over, than where confined in their action by bearing-reins.

The overpowering idea is, that a horse looks better ewe-necked and his head thrown into the air. In order to gratify this foolish whim, we are constantly compelling him to overstrain and overexert those very muscles which should be kept in reserve for extra difficulties. It is a mistake to think that the check-rein improves a horse's appearance, or that it even prevents a horse from falling down. In regard to the latter, it has directly the contrary effect, by preventing many a one from recovering from a stumble.

The check-rein should be abolished. "It wastes motive power. Its use is unhealthy, for it disturbs the otherwise naturally and equally distributed vital forces. It shortens the life of the horse. It diminishes his speed and lesses the free and quick action, so essential to the animal's safety and that of the driver." It is of no use except to prevent rubbing off the bridle or attempting to feed when stopping on the road.

At another time, we intend to say something of the use of "winkers," and of allowing the foretop to flow over the eyes of the horse, with some comments on the torturing of cats and minor animals.

STOCK OF WOOL IN NEW YORK.—The amount of foreign and of domestic wool in New York, Jan. 1, 1870, and at the same time for the five previous years, is stated by James Lynch, of that city, to be as follows, in pounds:—

	Domestic.	Foreign.	Total.
1870	8,667,000	3,397,300	11,964,300
1869	11 138.000	5,694 200	16,832 200
1868	6,511,000	8,313,650	14,824,650
1867	7.330,000	14.902 500	22 232.500
1866	4,500,000	7.800,000	12,300,000
1865	4,700,000	13,000,000	17,700,000

EXTRACTS AND REPLIES.

AMOUNT OF MILK FOR A POUND OF BUTTER.

I wish to learn what is the common average for 100 quarts of milk in pounds of butter? And also which is the most profitable to send the milk on the train to New York, or make a good article of butter? The distance I would have to carry my milk is two and a half miles. A. C.

Pittsfield, Mass., March 7, 1870.

REMARKS. — "A pint's a pound, the world around." But what's a quart of milk? We must settle this question before we can decide how much butter 100 quarts of milk will make. There are two measures—the wine and the beer. Four quarts of the one weigh nearly as much as five quarts of the other. The legal *gallon* of the United States, which is the wine measure, contains 231 cubic inches, and weighs, of distilled water, 8.3389 pounds; the beer measure contains 282 inches, and weighs 10 pounds. Hence a beer quart weighs 2½ pounds and a wine quart 2 pounds 1½ ounces. We suppose that in this country the beer measure is generally used for milk, and in England the wine measure. Uniformity in this as in all other weights and measures is very desirable, and as the wine measure has been legalized by our General Government, and by the legislature of Massachusetts, we hope it will be generally adopted throughout the country, by dairymen as well as others.

From our own experience in butter making, we are inclined to the opinion that "book farmers," or those who base their opinion on published statements, generally over-estimate the amount of butter obtained from one hundred quarts, or any other given quantity of milk. People are much more willing to report successes than failures; large crops and large yields, than small ones. Mr. Buckminster, of Framingham, Mass., who raised the Devon stock for sale, asserted some years ago that four quarts of milk from one of his cows had made a pound of butter. Great products from Alderney or Jersey cows have also been reported by owners who wished to sell them at fancy prices. But such butter making is seldom realized by "outback" farmers.

Mr. Horsfall, an English gentleman, who experimented in the use of cooked food and high feeding, and who kept his cows beef-fat, selling a part of his milk and making butter from a part, tested the matter of butter making pretty thoroughly. He repeatedly tried the experiment with sixteen "quarts"—wine measure we suppose—and the amount of butter from the 16 quarts varied from 24 to 27½ ounces on the various trials with the milk from his high-fed cows. Allowing 26 ounces as the average, 10 quarts or 20 pounds 13 ounces of milk were required for a pound of butter. On inquiry among his neighbors who kept their cows poorer, he found that a quart at a milking was allowed for a pound of butter a week—or fourteen (small) quarts for a pound of butter. A very careful statement was made some years since by a Pennsylvania dairyman, who said that milk varied so much that it was very difficult to say how much milk would make a pound of butter, on an average, but from "common cows," he calculated on from nine to eleven quarts, or from eighteen to twenty-two pounds of milk for one of butter. This corresponds very nearly with the statement of Mr. G. C. Bidwell, one of our subscribers in Rockingham, Vt., to whom we put your inquiry, who said that his rule was eight large quarts, or twenty pounds, but that it would vary considerably with the season, &c. Now if we allow 20 pounds of milk to one of butter, 100 quarts large measure would make 12½ pounds of butter, and 100 quarts of small measure nearly 10½ pounds.

Of the profit on milk sent to New York you must judge from the price paid and other circumstances, with which you must be better informed than ourselves.

WITCH GRASS.

I have read the FARMER for a few years, but have not yet seen anything on destroying barn or witch grass. I am not a farmer, but till a small garden, in which I have been much troubled to keep down said grass. Any hints on the subject will be gratefully received. SETH EDSON.

North Bridgewater, Mass., March 20, 1870.

REMARKS.—Barn and witch grass are very different things. Witch grass in cultivated land is a troublesome weed. If a garden patch was well stocked with it, we should prefer to plant with corn or potatoes one year, manuring in the hill, and covering if possible with earth in which there were few or no witch grass roots, and then *as often as the grass shows its head*—we mark this in italics, because every word means all it says—cut it off or pull it up, no matter how often a sharp hoe and the thumb and fingers have to be used,—remembering that the roots will extend several times as far as the leaf is allowed to project above the surface. If the land and the season is tolerably dry, witch grass *may* be hoed to death in a single summer. We do not say *you* will do it, because we do not know anything about the size of your bump of perseverance.

But if you must have garden stuff this year, fork—not spade—the ground finely and throw out the roots as carefully as though they were particles of gold, collect them in a heap, and when partly dry burn them, coalpit fashion, covering with sods and rubbish, and if no unburned roots remain, you may use the ashes with advantage. Either mode, merely *tried*, will fail; either, thoroughly *done* will succeed. Don't you ever say again that the FARMER never told you how to destroy witch grass in a garden.

CEMENT FLOORS FOR HORSE STALLS.

Will some one inform me the best way of making a horse stable floor of stone and cement, so that all the liquid manure may be saved? E. T.

Orleans 4-Corners, N. Y., 1870.

REMARKS.—The importance of saving all the manure, the desirableness of a good bed for the horse, the readiness with which ammonia is

developed by his urine, and other considerations that will occur to those who keep horses, make the question of the proper construction of the floors of stables a very important one, and we hope the inquiry of E. T. will call out the experience of horsemen. To save the urine, the floor should be so contrived that it will pass off readily, but at the same time it should not slant so as to inconvenience the horse that stands upon it. The fact that horses so frequently stand across a floor that pitches, shows that they do not like to have their toes much higher than their heels.

IMPROVEMENT OF SANDY SOIL.

I have a piece of land that in all probability was once the bed of a lake, as the subsoil is pond sand. Last season planted to corn with a good coat of manure ploughed under, and I had *yellow* corn the whole season, but no ears in the fall. Can any one tell me how to improve the now worthless bed of gray sand? GAIUS HOLMES.

Kingston, Mass., March 4, 1870.

REMARKS.—Sell it for what it will fetch, and buy better land, is the first answer that comes to our mind. But if there is a clay bed near by and you have faith and works enough to put a good dressing of it on a small piece, to begin with, say in the fall, to be mellowed by the frosts of winter, we should be glad to know how it works. But here we will stop, and ask "any one" who is acquanted with a better mode to make a soil out of hungry sand, to speak out, lest we repeat our first advice.

LAME SWINE.

I have a sow which has lost all power in her hind legs. She can set upon her haunches, yet is unable to stand up. Do you know of a remedy?

Hudson, N. H., March 2, 1870. READER.

REMARKS.—This singular disease seems to be quite common, particularly with "shotes." Its cause does not appear to be understood. In most cases the pigs recover, if left to themselves, particularly if they can be turned out on to fresh earth, and not fed. Let the animal go without food till it has a good appetite, and then put into a mess of swill a teacupful of powdered charcoal, the same quantity of ashes, and two or three spoonfuls of sulphur, also throw ashes and coal into the pen, for it to eat. In extreme cases a tablespoonful of copperas may be given in daily doses for a week.

FOOT ROT IN SHEEP.

I am aware that there has been enough said upon this subject, at least for the present. Still an explanation may be allowed in reply to Dr. Boynton's communication in your issue of February 19.

It was not my intention to criticise his mode of treating foot rot, any further than as it would apply to about nineteen men out of twenty. He assumes that if a dozen sheep can be cured by specific treatment, four hundred may be,—that he has in fact done it. I do not doubt it, and I suppose that about one man in twenty is possessed of a sufficient amount of energy, patience and perseverance to pursue the matter to the bitter end, and accomplish what he has done. But, of the other nineteen, I am fearful that when they get to about the three hundred and ninety-ninth sheep, they will begin to slight their work, and will leave enough of virus, as the doctor says, to contaminate the whole flock; that their patience and perseverance will about that time begin to flag out, and that their "eternal vigilance" would in fact come to an untimely end, and they would eventually have all their work to do over again.

Now it was for the special benefit of those nineteen men that I recommended a mode as described in your issue of January 22, which you recollect was merely placing a trough partially filled with a composition at the entrance of the salt yard, where the sheep would be obliged to pass through it, and thus in a measure doctor themselves, and also obviate the difficulty of doctoring with the thoroughness necessary to effect a permanent cure by the plan recommended by him.

As to the curative qualities of tobacco, or either of the other ingredients I named, I have nothing to say—there may be something better. It was not so much my purpose to prescribe a specific and infallible cure for foot rot, as to describe the manner of applying that cure, and any one may fix up nostrum or a combination of nostrums to suit his taste.

The appellation of "Wool Grower" does not *now* properly belong to me, for although a farmer, I have not kept sheep for many years. I wrote of my treatment of foot rot a long time ago.

A. G. NOYES.

Lancaster, N. H., March 24, 1870.

SUPERPHOSPHATE ON CORN.—WHEAT CROP.

While sending my fourth year's subscription for NEW ENGLAND FARMER, I wish to say that I used Bradley's phosphate last year on corn with good success. I spread about ten cartloads of manure to the acre, ploughed light, harrowed well and put one spoonful in a hill, all but three rows. In each hill of one of these rows I put a shovelful of green manure from the horse stable, and a handful of plaster and ashes was put in each hill. The other two rows were planted without anything. The fertilizers were all covered with earth before planting the corn. During the fore part of the season the corn on the manure looked the best; but later the phosphated came forward rapidly, and was the heaviest at harvest. Several persons while contrasting the three rows with the rest of the piece remarked, that the fodder on the other part was enough better to pay for the phosphate.

The season was very cold in this section, and corn was very light generally; but with the agents used, we gathered one hundred and seventy bushels of ears of sound, and twenty of soft corn from two acres.

I raised twenty bushels of wheat on one acre last year, and shall sow two acres this.

Shelburne, N. H., 1870. H. T. CUMMINGS.

FLORICULTURE.

This is the *gem* of the "cultures," and one eminently worthy our appreciation. Agriculture, horticulture, arboriculture are all admirable in their places, and we might say, without them we should cease to live; so without floriculture we should cease to enjoy—at least much which gives to earth its beauty, and goes to make life pleasant and home attractive.

What a change has been wrought in the minds and tastes of the people in regard to the care and culture of flowers within the last half—yes, quarter of a century! Then the privileged few had their flower gardens, with now and then an arbor and greenhouse. Now, where is the home destitute of flowers? and how many have their cultivated flower plots of greater or less pretentions,

and delight in the joys they afford! for "a thing of beauty is a joy forever."

Then we had scarcely a journal in the country devoted to the science. Now such magazines as the *Gardener's Monthly*, *Horticulturist* and the *Journal of Horticulture* reach all classes, and do much to elevate rural taste and create in the minds of the masses a love for the beautiful.

Then again, where there was one professional florist twenty-five years ago, there are ten to-day. For proof of this fact let reference be had to the advertising columns of the Agricultural Press then and now. Now "Floral Guides" and "Seed Catalogues" everywhere abound; while then such beautifully illustrated Annuals as those published by James Vick, of Rochester, and Messrs. Washburn, Breck, or Hovey, of Boston, would be looked upon by the masses with no little curiosity.

And my advice to the boys and girls, especially the farmers' sons and daughters, who read this article, is, procure some one of these illustrated catalogues, which you will find advertised in this and other agricultural journals. They are worth twice their cost as works of art—to say nothing of the lessons of instruction and profit you may receive by their perusal. I. W. SANBORN.

Lyndonville, Vt., March, 1870.

BLUE-BIRDS IN AN OLD BOOT.

Last spring a pair of blue-birds found an old boot in one of my apple trees near the house, in which they built a nest and hatched two broods of young birds. Would it not be a good plan to lay the boots where the birds can have access to them?

SNAKES EATING BIRD'S EGGS.

While walking out one morning, last summer, I saw the birds flying round a dry willow tree in much alarm and confusion, making a very great noise. On turning aside, I saw a large black snake with his tail coiled round a limb and his head in a woodpecker's hole. I killed the snake, and the egg-shells that came out of his mouth told what he had been about.

A DOG'S EXPERIENCE AWAY FROM HOME.

A farmer's dog went with his master to the depot, and on seeing the cars coming in thought there was a good chance for a little fun, by racing with and barking at them. But as their speed was a little beyond the vehicles to which he had been accustomed, he slipped under a wheel, losing one toe and a part of his tail. I will not trouble you with a moral, nor do I know whether he has been round to tell the other dogs, as did the fox in the fable, how much lighter and better they would be if dressed in his fashion, but I hardly think he will care to repeat his experiment on the railroad.

EDWARD CARLTON.

Westford, Mass., Feb. 18, 1870.

NOVA SCOTIA BEANS.

I have a remarkably prolific and excellent small white bean, which originated in this section from four beans brought here in the vest pocket of a gentleman from Nova Scotia, four years ago, where they are regarded as a very superior variety. From these four beans two-thirds of a cupful were raised the first year, and three pecks the next year. From one pint of these beans my father raised two bushels and a half. I send a part of two stalks, just to show you how they pod off. Some of the stalks have twice as many beans as are on both that I send you. LEWIS BEAL.

North Fairfield, Me., March 23, 1870.

REMARKS.—Very handsome specimens of beans are those received, and undoubtedly a most prolific variety. Mr. Beal, as will be seen by an advertisement in last week's FARMER, offers to furnish seed to those who wish to try the Nova Scotia bean. We shall plant those we received.

MUCK, SALT AND LIME.

For the benefit of my neighbors and farmers, I will give my experience in making manures from muck, salt and lime. I now own the Col. James Jaques farm in Wilmington, Mass. I have owned a part of it for the last ten years. I could not get all at once, as portions of it was held by the heirs, and I have been obliged to purchase a piece at a time. I now own about seventy-five acres. The first lot of eleven acres, was called by Mr. A. G. Sheldon the best lot of land in Wilmington. I have owned this lot five years. The first year I cut about ten hundred pounds poor redtop hay. I now cut on five acres of this land about eight tons. On this lot there is muck to the depth of from four to eight feet deep, and of the very best quality. I take out the muck the last of August, and put enough in my barn cellar to absorb the urine from the cows overhead; also, fill my piggery about half full.

The salt and brine from my grocery store, amounting to about twenty barrels a year is saved as carefully as I would gold dust, and is turned down the scuttle and over the muck in the barn cellar from time to time, as it is made. Outside of the stable, I make large heaps of muck, say five cords in a place, and add to each four barrels of salt and brine, and four casks air slacked lime, and overhaul twice. In the spring cart this on to land that was ploughed in the fall, say thirty cart loads, or seven cords to the acre and plough it in. Plant one year; lay down to grass the next spring and cut grass for five years without much deterioration in quantity or quality. Now I would say to my brother farmers, get out your muck in the fall, before fall rains begin, and go to the village or city and engage all the salt and brine they make from pork and fish, which most grocers throw into the streets, even if you have to pay something for it. You will find it the cheapest and strongest of all manures that can be got up fifteen miles from Boston. J. A. AMES.

Wilmington, Mass., March 19, 1870.

GRAIN FOR EWES IN MILK.

Having noticed an inquiry in the FARMER, a few weeks since, in relation to the best kinds of grain to feed sheep, with especial reference to the production of milk, I give herewith the results of my own experience:—

If for any reason it is desirable to have lambs dropped the last of February or the first of March, I know of no kind of grain which, with hay alone, will maintain an adequate flow of milk until sheep can be turned to pasture. The man who would raise winter lambs successfully must have in store a liberal supply of roots,—beets and turnips are best,—and should feed them two or three weeks at least before the sheep begin to drop their lambs. In connection with roots, feed liberally with *early cut hay*, and equal proportions of corn meal and oats as long as the sheep are at the barn, and the flow of milk can be sustained. Without this liberal feed he will have in May a poor sheep, and poorer lamb. The prevailing practice in this section is to have lambs dropped from the first to the tenth or fifteenth of April, and from this time till the feed has started in the pastures, sheep can be sustained with much less cost and labor. For this length of time roots can be dispensed with. But as a grain feed, barley meal and oats in equal proportions, though some might wish to add a

sprinkling of corn, would leave little to be desired in the way of grain. The earliest cut hay of the year should be carefully saved for this season. This feed with intelligent care and oversight, will send both ewe and lamb to pasture in thrifty condition. E. R. S.

Cornish, N. H., March 14, 1870.

HUMOR IN A COLT.

An eruption commenced on the neck of my colt, near the roots of the mane. It spreads pretty fast. It appears to be a pimpled or vesicular eruption. After awhile the vesicles break, the hair and outer skin comes off, leaving a bare spot covered with scurf, while a fluid oozes from beneath and forms a scab, which likewise soon peels off, leaving a wider spot. It is attended by itching and tenderness. The colt was fat when the trouble was first noticed, but has since lost flesh. Is there any danger of my taking the disease in handling it? Is it the manger? Any directions for curing the colt will greatly oblige P.

Bethel, Me., March, 1870.

REMARKS.—Give your colt, once or twice a day, a tablespoonful of the following powder:—Sulphur and cream of tartar, each, two parts; saltpetre and crude antimony, each, one part. Mix. At the same time bathe the parts affected twice a day, with Nichols', or Squibb's solution of carbolic acid, in the proportions of one part of the solution to three or four parts of soft water. If this does not cure, dissolve three to six grains of corrosive sublimate in one ounce of soft water, and wash the parts affected.

GARGET IN A HEIFER.

I have a heifer that has the garget badly. She is not in milk yet, but is to be in a few days. There is not one particle of milk in her bag, but it is one solid cake and very sore. What can be done for it? A. C.

Pittsfield, Mass., March, 1870.

REMARKS.—Paint the hiefer's bag twice a day with tincture of iodine, or, if you prefer, bathe the affected part three times a day with a solution made of iodine, half an ounce; iodide of potassium, two ounces; soft water, one pint. At the same time, give the animal a tabespoonful of the above mentioned solution twice a day, in a bran mash. If you can manage to steam, ferment, or poultice the diseased organ, it will be serviceable to do so.

SOAP MAKING.

I notice directions in your paper occasionally about soap making; how to prepare the ashes, lye, grease and all the other numerous *et ceteras*. Now I wish to give your readers a *better* receipt, and show them how to avoid at least two-thirds of the labor required by the process above mentioned; and this we all know is the great desideratum in these times of scarce and poor help.

Firstly, use your ashes to the very best advantage on your farm, as it is taken for granted you own one; if not, apply them judiciously on your garden plat. Secondly, purchase the prepared lye, or concentrated potash, which comes sealed up in sheet iron cans in pound packages, and which retails with us for twenty-five cents per pound.

Prepare your grease by cleansing, and follow strictly the directions which come with the cans for the purpose of making both hard and soft soap. Two cans or pounds of the potash, will make—I will not say how many pounds of hard soap—but certainly enough to last a small family for months, at an outlay (provided you have your own grease) of fifty cents, and also a saving of much labor. And a decided improvement it is we think, over the old-fashioned leach and the risk of having good luck. Try it *Mrs.* Farmers and report result. N. B.—Not in the potash business.

Salisbury, Conn., March 24, 1870. W. J. P.

PREVENTION OF DISEASE IN COWS.

I saw in your valuable paper, not long since, an inquiry as to the best way to treat a cow that had cast her withers. I adopt the principle that an ounce of prevention is better than a pound of cure. I keep my cows well through the winter, and then some three weeks prior to yeaning time, I begin to feed extra, so as to have them in good thriving condition, and in a dry warm place, so that they shall not take cold. This has been my practice for twenty-five years, with more or less cows, without seeing even a symptom of the disease.

Atkinson, Me., April, 1870. A SUBSCRIBER.

CURE FOR SCOURING.

I will give "Subscriber," who is troubled with his animals scouring, a very simple remedy that has never failed me nor my neighbors, as far as I can learn. Take two quarts of the best wheat flour that can be found, and wet it to the thickness of common cream with luke warm water, and give to the animals; but if it will not be taken, put it in a long-necked bottle and turn it down. Repeat the dose once in four hours, until a change is produced. I never have had to give it the fourth time. E. J. BUTTOLPH.

Buffalo, N. Y., March 17, 1870.

A CURE FOR CATTLE SCOURING.

Take for a cow a piece of rennet one inch and a half square; cut it in fine bits and put it in some meal or other mess that the cow will eat. The rennet should be well dried. If the first dose does not stop it, give once a day until cured. I have tried this at different times, but never had to give more than three doses. T. L. T.

Antwerp, N. Y., March, 1870.

MILK FEVER — OVERFLOWING OF THE GALL, &c.

Some time during the last fall, (November I think,) I gave you an account of the sickness and death of two or three cows, which you thought was milk fever, from the description I sent. In the FARMER of March 5th, I find a communication from Mr. Wm. Swett, of South Paris, Me., headed, "Overflowing of the Gall and Liver Complaint," in which he says he thinks we did not understand the disease. We admit that we did not—wish we did. He then goes on to give the symptoms of, and the remedies for overflowing of the gall, &c. The cows that I spoke of in November did not have the symptoms he describes as indicating that disease; but on the very day that the FARMER came, that contained his communication, we had a case that answered exactly to what he describes, and I found his prescription just the medicine for the case. SENEX.

Cumberland, R. I., March 28, 1870.

—A correspondent of the American *Agriculturist*, in Montana, states that stock fatten and thrive on the wild bunch grass of that section all the year round, preferring it even in January to well-cured hay, and that cattle and horses keep sleek and fat on it all the year round.

THE VERBENA.

This beautiful flower, well represented in the above engraving from *Washburn's Amateur Cultivator's Guide*, is deservedly a favorite both for house and garden culture, Mr. Breck gives the following description in his "*Book of Flowers.*" After mentioning its first introduction of the white, crimson and pink varieties into this country from Buenos Ayres, by Mr. Robert Buist, of Philadelphia, about the year 1835, Mr. Breck says:—

From these have sprung all the numerous varieties, many hundred in number, now in our collections. In these varieties may be found every color except yellow, and even this color in its lightest shades, is sometimes seen in the eyes of some of the sorts. We now have crimson, scarlet, rose, white, lilac, bluish purple in all their shades, with eyes of purple, crimson, rose, white, or straw color, and also a number of striped or spotted sorts. No plants are more more generally cultivated, or more eagerly sought after, than this beautiful family. I sometimes wonder how a flower-garden could be considered passable without the Verbena. The habits of all are similar, naturally prostrate creeping plants, taking root freely wherever the stems come in contact with the ground, and sending forth innumerable clusters of their many hued, brilliant flowers, from June to November.

The Verbena is kept with difficulty through the winter, except in the green-house or in warm rooms; unless kept growing, it will perish. It cannot, therefore, be kept even in a dry cellar, and it is not hardy enough to stand the

winter. Most of the varieties are easily raised from cuttings, and can be purchased at so small a price from florists, that it is by far the more economical to buy a few dozen in the spring than to attempt to keep them through the winter. Small plants turned out from the pots in June soon make large plants, and by October will be two or three feet across. They continue to flower after severe frosts, and are among the last lingering flowers of autumn.

The seed, sown in May, in the open ground, will begin to show flowers in August; but, when the seed is sown in January, in the green-house, and afterwards potted and placed in a hot-bed in March or April, will begin to flower in June.

Seedling plants produce seed in abundance, but those plants which have been a long time propagated from cuttings, lose that power in a great measure, and produce none or very sparingly. It is easy enough to raise seedlings, but the chance of getting an improved variety, may not be one to twenty or one in fifty.

No plant equals the Verbena for masses, particularly when grown in fanciful beds and on lawns, as the brilliancy of the flowers contrasts finely with the green grass.

For the New England Farmer.

MAKING, HOUSING AND APPLYING MANURE.

As the farmers of the New England States must have manure in order to raise crops profitably, I thought I would write a little of my experience in relation to its management. I have tried many experiments with manures and crops, but I am afraid I shall make poor work in getting an intelligible account of them on paper.

In the first place I make all I can and keep it housed as much as I can until wanted for use. In fact it is all under cover, except what the cattle drop in the yard in warm pleasant days. My horse manure goes under the stable where the hogs root it over and keep it from heating. Then I endeavor to save the liquids. In the summer I keep muck in the pig pen, and make large quantities of good manure there. My cow stable has a trench, with a walk behind it, in which I keep sawdust, dry muck or anything that will save the liquid. This is thrown under a shed, as I have no cellar,—the land on which my barn stands being very level. I keep muck in the yard and sheds to mix with the manure, and to put at the back door and under the privy, where all the slops and suds are thrown, to keep it from smelling bad. I clean these places out twice a year. It is surprising to see how much manure one can make with but little cost when we go to work in earnest.

But my experience has taught me that the great secret lies in keeping manure well housed until wanted for use. I think one load from my shed is as good as three from my yard, and equal to two loads from a heap that has been exposed to the snows and rains through the winter and spring.

And here, Mr. Editor, I beg leave to differ a trifle from your remarks on Work for February, in regard to drawing out manure from a cellar to be exposed to the storms till used. It may be necessary in some cases, if there is not room, or if it is to be drawn up hill where the ground is soft in the spring. I think the less manure is handled over and exposed to the atmosphere and storms the more valuable it is. If manure could be mingled with the soil as soon as dropped, would it not be more lasting in the soil? I think heavy rains on manure heaps in the field washes a great deal of the strength of it below the reach of plant roots, on sandy or gravelly soil; on clay or hard-pan bottom, it might not do so. I have heard it said the soil will so retain the fertilizing matter in water while passing through it that none will go below the reach of roots, but my experience hardly agrees with this.

I have one of the patent pipe wells in my barnyard near the barn, where there is no chance for water or manure to get near it, as it is in a small yard by itself. It was sunk twelve feet. During a heavy rain storm in March, 1867, the eave spout between two buildings over my manure heap got stopped up and the water run on to the heap. This manure heap was twenty-six feet from the well, on land that was nearly level, but a little higher than that around the well. In a day or two the water from the well began to look red, and to taste bad, and the stock refused to drink it until compelled by thirst. The water remained bad for about a week. I have no doubt it was caused by the water from the heap of manure, which passed through the soil, which is gravelly.

I have drawn out manure from my sheep in the winter when the shed got too full, and have found that those spots on which it was piled absorb so much of the strength of the manure that no crop would grow on them the first year.

I once lived on a dry, sandy farm where I could use my stable manure to a very good advantage in the hill for corn; but concluding I was losing too much by exposing my manure to the weather, I built a shed over my manure heaps, and the result was that the first year my housed manure was so much stronger than that exposed to the weather, which I had previously used, that I got no corn, as it was too powerful to be put in the hill.

There is no way I can get so much benefit from manure as to plough it in four or five inches deep, mostly on green sward, say about thirty loads to the acre; putting a little old manure or superphosphate in the hill. In this way I get good corn and potatoes. The past year my potatoes yielded at the rate of 450

bushels to the acre; corn, 65; oats, 70. After my crops are off in the fall I plough again, running two or three inches deeper. In the spring sow to oats, from one and a half to two bushels to the acre, and get a good catch of grass.

I have top-dressed mowing lands with thirty loads to the acre, on both wet and dry land, but do not receive as much benefit as when ploughed in. Ashes, I think, are best harrowed in for hoed crops. I usually cut two crops of grass a year for two or three years, then one crop a year or two longer.

I think manure that has not been leached lasts much longer in the soil. I have doubled the productiveness of my farm in the twelve years I have been on it, with but very little manure except what I have made.

It may be interesting to some of your readers to know how much stock I keep on what grows on the twenty-eight acres that have been cultivated, on an average, during the past fourteen years, besides selling some corn, oats and potatoes. I have 135 sheep, eight head of cattle, mostly grown, three horses, and, excepting flour, as I do not raise wheat, I may say a family of eight persons. Now, brother farmers, house your manure, cut your hay ealier, cultivate your land better, for a few years, and note the result. C. F. LINCOLN.

Woodstock, Vt., March, 1870.

REMARKS.—In connection with this valuable statement of the writer's mode of making, housing and applying manure, and of his general farm management, it may not be improper for us to say that the first premium on farms was awarded to him last fall by the agricultutural society of Windsor County, and that in making their award the Committee said, "Mr. Lincoln has doubled the productive capacity of his farm in about ten years, and that without the aid of imported fertilizers, except to a very limited degree. This has been accomplished by a judicious rotation of crops, and by utilizing every available source of manure, and keeping it well housed till applied to the land."

CELLAR WALLS.

A correspondent of the *New England Homestead* adopted the following method of constructing the cellar walls of two houses with perfect success:—

A trench fifteen inches wide and two feet deep was dug, to receive a trench wall on which the underpinning was to be laid. The trench was filled to a level with the ground with rough or cobble stones, packed in as close as might be. After this, the cellar was dug, leaving a space inside the trench of four inches wide on the top. This space or shelf was filled up in a slanting direction, until it reached the underpinning. It should be done with moist earth, just before pointing, and made compact with the back of a shovel. If the cellar is seven feet deep, the wall should slant inwards about two and a half feet from the underpinning, and should be made smooth and true with a shovel or trowel; at least this is my method.

As I wished to use an ox shovel, I left one end open and stoned it up, as there was no chance for making a trench then. After the houses were built, the cellar was lined throughout, sides and bottom, with hydraulic cement. I used but one coat, though, for the bottom, perhaps two would be better.

The advantage of this method, are: 1st In building an ordinary sized house, in the Connecticut River Valley, where stones are costly, it saves at least a hundred dollars; 2d, it is proof against rats; 3d, it is clean, warm and dry; 4th, there is no heaving of the walls. The builder of my first house was somewhat sceptical on this point, and after it had stood one winter, he examined carefully every foot of the foundation, and not finding a single crack in the whole, be frankly acknowledge its excellence. I presume that very coarse gravel would answer the same purpose as small stones, in filling the trench.

I ought perhaps, to add that in order to take advantage of this method, the site for the house should be tolerably level, and the ground sandy or sandy loam. I think it would not answer when the soil is clay or when there are springs. T. G. H.